

THE WORLD'S FIRST AND ONLY AIR CARGO MAGAZINE — NOW IN ITS 14TH YEAR

AIR TRANSPORTATION

Vol. 28, No. 5

THE AIR MAGAZINE FOR THE BUSINESS EXECUTIVE

May, 1956



BIG LOAD • BIG LIFT
BIG PERFORMANCE
ARE BUILT INTO
FAIRCHILD C-123

Maximum load-carrying capacity and workhorse durability are just two of the many reasons why the Fairchild C-123 Assault Transport is ideally suited to tough jobs in all combat airlift operations.

Equipped with Fairchild J44 turbojets on each wing-tip, the C-123 is provided with a power package of 2,000 lbs. extra thrust to meet any critical take-off or flight requirement.

In front line operations, on any terrain, under the most difficult conditions, the Fairchild C-123 gives *big load*, *big lift*, and *big performance* where and when utility and logistics support is needed.

A Division of Fairchild Engine and Airplane Corporation.



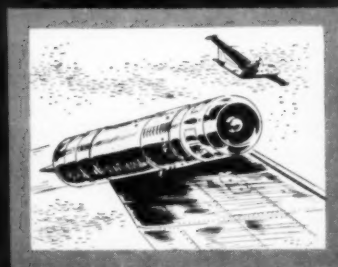
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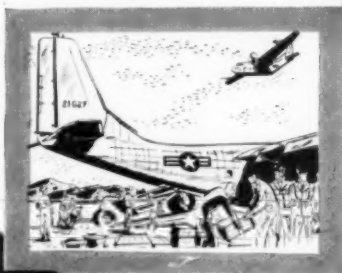
...WHERE THE FUTURE IS MEASURED IN LIGHT-YEARS!



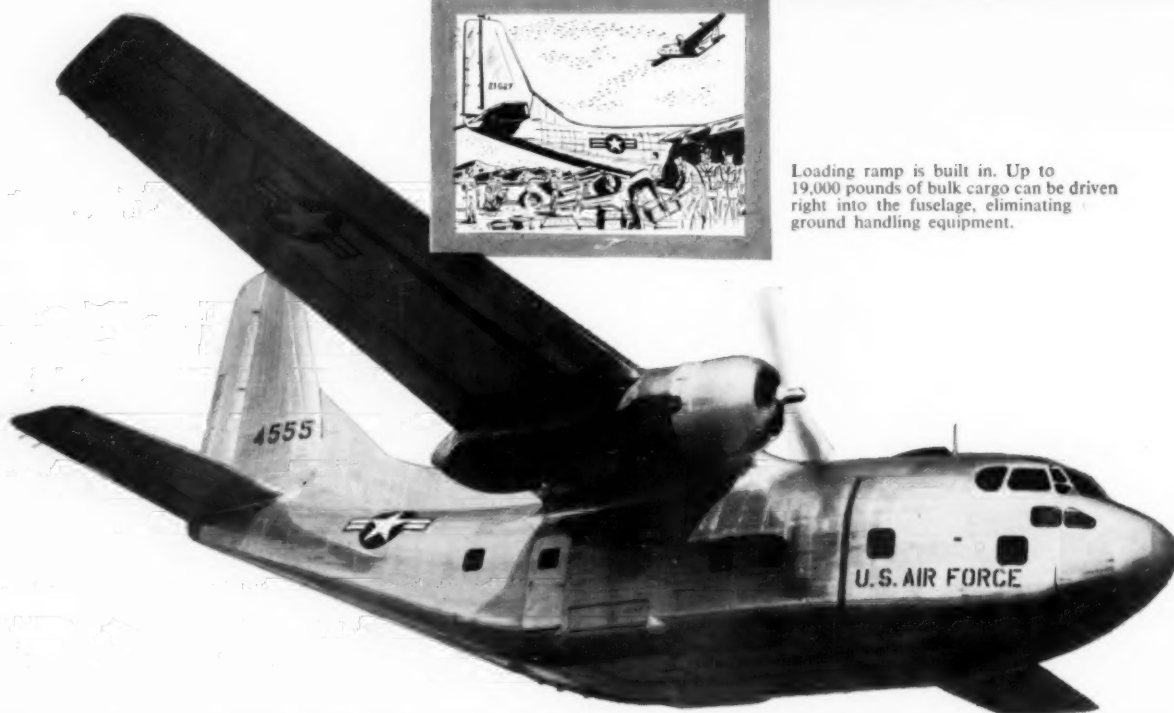
Lands or takes off in less than 10 times its own length. The Fairchild C-123 operates on any terrain with only 600 feet of field space.



Fairchild J44 turbojet engines give added power thrust to the C-123, providing an extra margin of safety for any emergency condition.



Loading ramp is built in. Up to 19,000 pounds of bulk cargo can be driven right into the fuselage, eliminating ground handling equipment.



Ship fast

UNITED offers 300-mph DC-6A Cargoliner service coast to coast!

UNITED alone has radar-equipped DC-6A Cargoliners for smoother flight, more dependability!

UNITED alone links major markets in the East, Midwest, all the Pacific Coast!

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UNITED'S DC-6As have greater tie-down strength than any other cargo plane!

UNITED'S DC-6A Motorized Tug Bar moves heaviest pieces with extra care!

UNITED'S pre-loaded mobile pallets help protect cargo, speed handling!

Ship United

UNITED'S Telemeter Airbill means faster pick-up at terminal points!

UNITED offers reserved Air Freight space on all equipment!

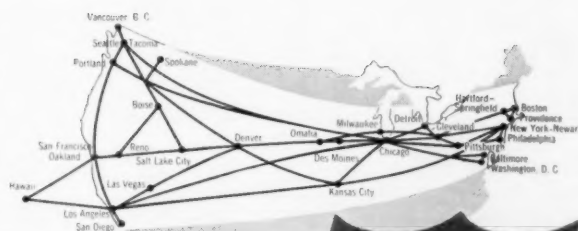
UNITED'S centralized payload control guarantees space dependability!



Examples of United's Low Air Freight rates— per 100 lbs.*

CHICAGO to CLEVELAND	\$4.78
NEW YORK to DETROIT	\$5.90
DENVER to OMAHA	\$6.42
SEATTLE to LOS ANGELES	\$9.80
PHILADELPHIA to PORTLAND	\$24.15
SAN FRANCISCO to BOSTON	\$27.00

*These are the rates for most commodities. They are often lower for larger shipments. Rates shown are for information only, are subject to change, and do not include the 3% federal tax on domestic shipments.



For service or information, call the nearest United Air Lines Representative. Write for free Air Freight booklet, Cargo Sales Division, Dept. AT-5, United Air Lines, 5959 S. Cicero Ave., Chicago 38.

ALONG THE WAY... OF **TWA**

TWA AIR CARGO SHIPMENT LAUNCHED VIA OX CART!

TRUE ENOUGH...SHIPMENT FROM FARRUKHABAD ON GANGES RIVER IN INDIA STARTED TO CLEVELAND, OHIO, THE OLD WAY...BY OX CART. THE BLOOMFIELD COMPANY IMPORTED ENTIRE OUTPUT OF TOWN'S COLORFUL COTTON PRINTS...NEEDED THEM IN A HURRY TO MEET SPRING BUYING SEASON IN OVER 2000 RETAIL STORES. FROM BOMBAY SHIPMENT WAS RUSHED DIRECT TO U.S.A. VIA TWA AIR CARGO...THE MODERN, DEPENDABLE, LOW-COST WAY. KEEP TWA IN MIND. IT'S THE BEST BET WHEN- EVER SPEED'S A FACTOR. MINIMIZES COST OF INVENTORY IN TRANSIT, TOO.



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VIA TWA

WESTERN GROWERS HAVE LONG USED THIS IDEA... AND REGULARLY SPEED FARM-FRESH FRUITS AND VEGETABLES DIRECT TO MARKETS IN MATTER OF HOURS VIA TWA AIR CARGO. ASSURES BETTER QUALITY... PERMITS REPLENISHING STOCKS QUICKLY... RESULTS IN FASTER TURNOVER. PHONE TWA ANY TIME.

SUPER-G "BOOKED AIRFREIGHT"

WHEN YOU WANT TO MAKE SURE YOUR COAST-TO-COAST SHIPMENTS MOVE ON SCHEDULE... CALL NEAREST TWA OFFICE AND ASK "ABOUT SUPER-G BOOKED AIRFREIGHT." CARGO CONSULTANT WILL EXPLAIN THIS EASY, QUICK, SURE SERVICE.



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Air Freight and - in U.S.A. - Air Express*

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TRANS WORLD AIRLINES
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AIR TRANSPORTATION

The World's First and Only Air Cargo
Magazine . . . Established
October, 1942



Member of Business Publications Audit
of Circulation, Inc.

AIR TRANSPORTATION, published once each month, thoroughly covers the entire air cargo industry for the benefit of all those engaged in shipping and handling domestic and international air freight, air express, and air parcel post, as well as using the domestic and international air mail services. Included in **AIR TRANSPORTATION'S** wide coverage are: air shipping, cargoplane development, rates, packaging, materials handling, documentation, air cargo terminal development, insurance, routing, interline procedures, new equipment, commercial airlines, military air transport service, air freight forwarders, and business flights.

Subscription rate for United States and Territories, \$5.00 for one year, \$8.00 for two years, and \$11.00 for three years; foreign countries, \$6.00 for one year, \$10.00 for two years, and \$14.00 for three years. Individual copies (except November), 50 cents each; November issue, \$1.00 per copy.

John F. Budd
Editor and Publisher

Editorial	Advertising
Richard Malkin	Frank R. Brine
Executive Editor	Asst. to Publisher

L. R. Hackney, Contributing Editor

Dr. W. L. Grossman, Contributing Editor

Langdon P. Marvin, Jr.,
Contributing Editor

K. H. Lyons, Business Manager

William E. Budd,
Assistant Business Manager
(on Military leave)

Frank W. Budd, Circulation Manager

Keith H. Evans & Associates
West Coast Advertising Representative
3723 Wilshire Blvd., Los Angeles 5, Calif.
Phone: DUmkirk 8-2981

J. B. Tratsart, Ltd.
United Kingdom Sales Representative
799, Harrow Road
Sudbury, Wembley
Middlesex, England

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May, 1956

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Net circulation of this issue (not including distribution to advertising agencies, advertising prospects, public relations firms, newspapers, and magazines; special distributions for promotional purposes; and cash sales) totals 9,649 copies. Gross circulation is more than 10,200 copies. This issue will be received by a minimum of

8,606 shipping and business executives including:	332 airline executives and other personnel
5,220 traffic managers	129 military personnel (principally MATS)
1,000 presidents; partners; proprietors	5 banks
68 vice presidents	15 insurance firms
57 secretaries; treasurers; controllers	86 trade organizations
559 freight forwarders	212 Federal, state and city government departments
456 export-import managers; export-import merchants	87 educational institutions and students
260 purchasing agents	59 business and public libraries
847 aviation department heads of commercial and industrial firms	44 foreign governments
139 general and sales managers	46 aircraft and aircraft equipment manufacturers
1 awaiting classification	28 miscellaneous

The most recent study of *Air Transportation's* circulation has shown a pass-along of each issue to 3.45 persons, or a total readership of 4.45 persons per copy. On this basis, this issue of *Air Transportation* will be read by a minimum of 42,938 persons. The latter figure does not include readers not classified under "net circulation."

Now . . . **SLICK** does it again!

SLICK ANNOUNCES . . .

Shown here are sensational major innovations by Slick that reduce shipping costs, air shipping time, and open up additional shipping areas served directly by Slick.

The only NON-STOP DC-6A cargo flight

NEW Overnight Service!

San Francisco

Los Angeles

San Diego

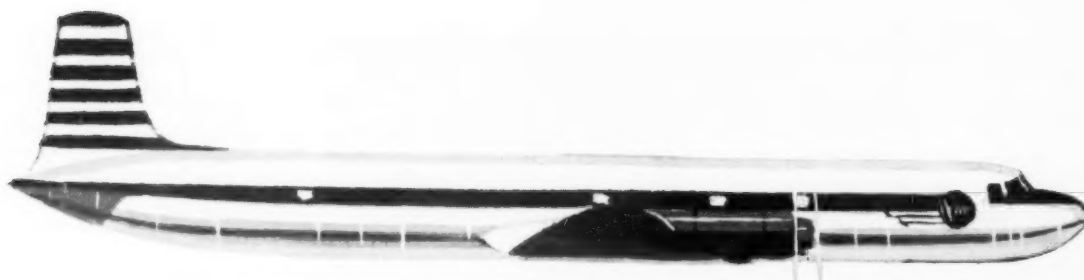
Shown here are but a few of the new Slick services. Not shown are Slick's new direct flights from New England cities to the Midwest, from Texas to the Midwest, and from Texas to the West Coast.

NEW Lower-Than-Surface Rates!
Now . . . you can ship much faster by air
and for less cost!

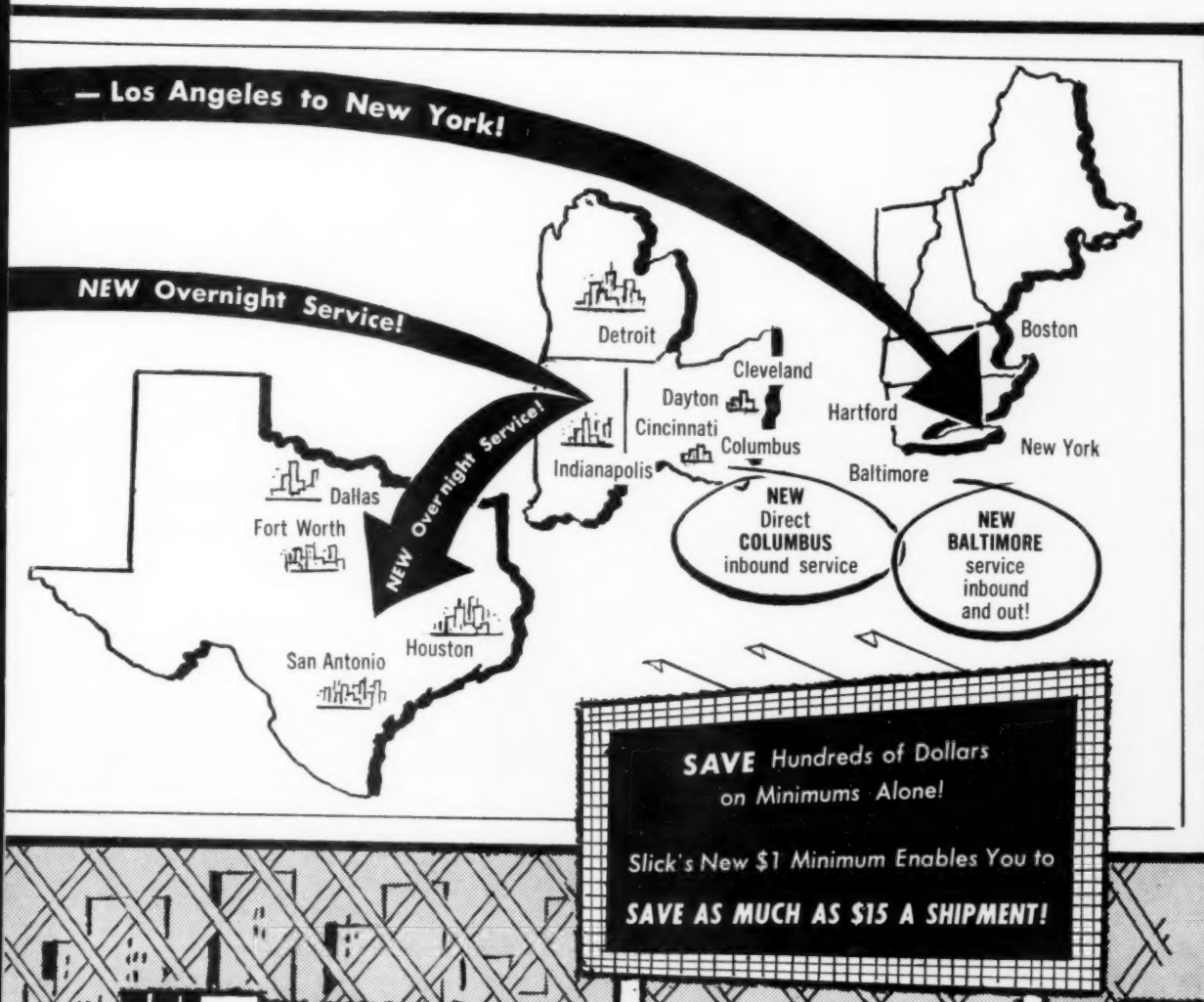
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SAVE Hundreds of Dollars
on Minimums Alone!

Slick's New \$1 Minimum Enables You to
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Call your local Slick station for complete details immediately!

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MAY 1956—PAGE 7

DOMESTIC
AIR CARGO



INTERNATIONAL
AIR CARGO

VOL. 28

MAY, 1956

No. 5

Slick Celebrates Its First Decade

NEW YORK—Slick Airways, transcontinental all-cargo carrier, combined the occasion of its tenth anniversary with the christening of a new DC-6A last month. D. W. Rentzel, Slick's president, announced simultaneously that beginning May 1 the airline will start Eastbound nonstop service from Los Angeles to New York, "the only nightly air cargo service of its kind offered to West Coast and New York area shippers."

UAL Deferred Billing

CHICAGO—United Air Lines has effected a system of deferred billing of air freight shipments which steps up the flow of cargo from origin to destination. The

Seaboard Airlifts 16 Tons To Inaugurate Scheduled Service

NEW YORK—A 32,000-pound load of mixed freight bound for Frankfurt kicked off the United States' first scheduled transatlantic all-cargo service last month when a Seaboard & Western Airlines *Super Constellation* took off from New York International Airport with a payload ranging from thousands of pounds of auto and caterpillar tires to such small shipments as pharmaceuticals and works of art. The airline, which in almost nine years of operation made more than 7,500 ocean crossings, was certificated on June 17, 1955.

airline no longer handles airwaybill rating when a credit shipment is received. This is held up until a time when it does not interfere with normal traffic flow. According to United cargomen, the improved method has cut down paperwork delays and sped up ground handling.

The initial flight to the West German key point was made via Shannon and London. Seaboard now operates five trips weekly in each direction. Eastbound flights from Idlewild are at midnight, Monday through Friday. Westbound flights terminate in New York late Sunday and Thursday nights and early Sunday, Tuesday, and Thursday mornings. London is served four times a week; Frankfurt, Dusseldorf, Stuttgart, Nuremberg, and Munich, three each; and Paris, Geneva, Zurich, Brussels, Amsterdam, and Hamburg, one each.

With the start of scheduled service, Seaboard officially became a member of the International Air Transport Association, world organization of scheduled international air carriers.

SPRING IS HERE!



Spring is in full blossom in North America, but in South America it's Fall—and that means Harvest Time. Isabell Judell, pretty Panagra hostess, underscores the fact with a bunch of Chilean grapes which the airline has just flown north to United States markets. Panagra regularly hauls various types of out-of-season South American fruits.

General Sales Agency Agreements Announced

Recent announcements revealed that four international air carriers are involved in new general sales agency agreements.

Pacts with Seaboard & Western Airlines have been signed by Air France and British Overseas Airways Corporation. A similar agreement has been reached by TWA and TACA.

Air France will act for Seaboard in France as well as in 14 countries of the French Union (Algeria, Tunisia, Morocco, French West Africa, Togo, French Equatorial Africa, Cameroon, Madagascar, South Viet Nam, Cambodia, Laos, Martinique, Guadeloupe, and French Guiana). It will also perform the same function in Mexico. BOAC's agency agreement covers the United Kingdom and Northern Ireland. In the TWA-TACA deal, TWA will represent TACA in the United States, Europe, Africa, and Asia; and TACA will represent TWA in Central America.

New ATA Members

WASHINGTON, D. C.—The nation's two transcontinental all-cargo airlines, Slick Airways and Flying Tiger Line, have been approved as associate members by the Air Transport Association, organization of the scheduled airlines of the United States.

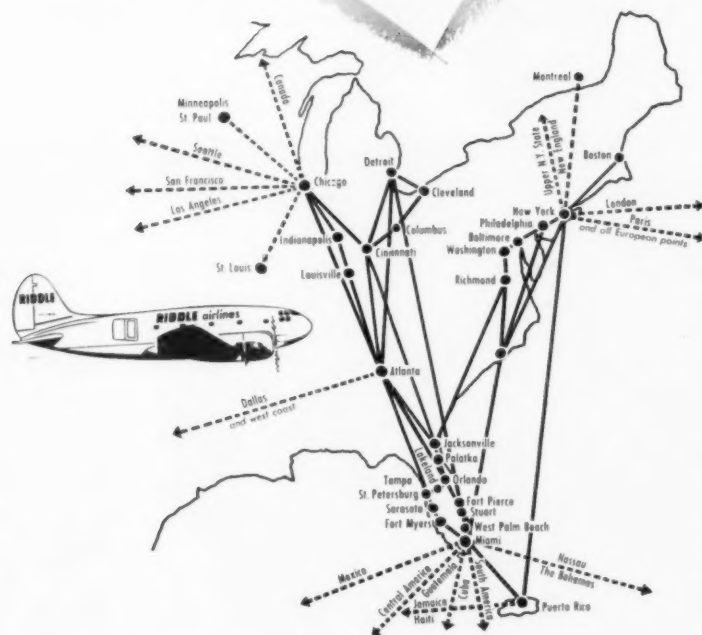
RIDDLE airlines inc.

Executive Offices, International Airport, Miami, Florida, Phone TU 7-2651
 NEW YORK, 235 W. 46th St., Phone PLaza 7-0168
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 the EASTERN
 SEABOARD
 the MIDWEST

the SOUTH
 PUERTO RICO
 and the
 WORLD

Ship by the Clock...



**Not
 the
 Calendar!**

**SHIP
 BY**

RIDDLE

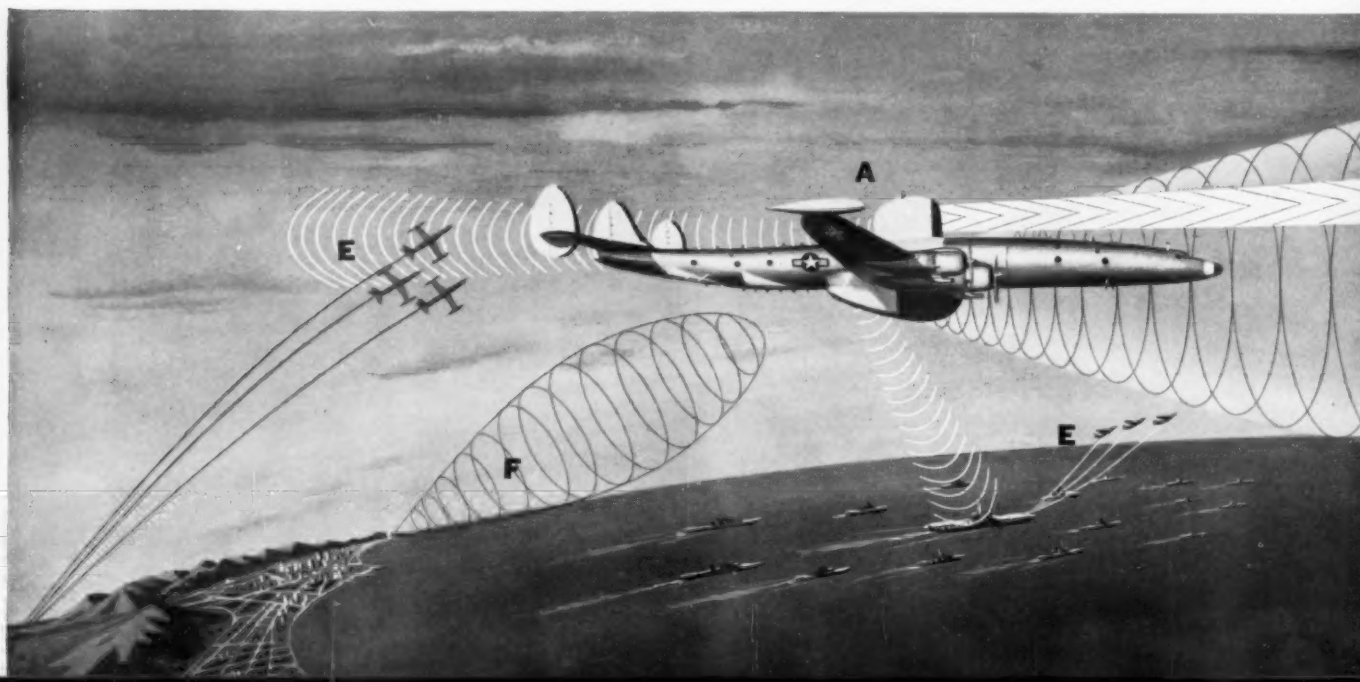
New U.S. Concept for TOTAL DEFENSE

In this age of awesome airborne nuclear weapons, a vast umbrella of airborne electronics will safeguard our nation against sneak attack



BELOW—A WEAPONS SYSTEM IN ACTION. An electronics-laden Super Constellation early-warning plane (A), patrolling our outermost defense perimeter hundreds of miles from our shores and borders, from its high altitude can "see" beyond the horizon and detect both

high-flying and low-flying enemy aircraft (B). Using its powerful search radar (C) and height-finder radar beam (D) to pinpoint position of invaders, the patrol plane alerts our interceptors (E), which swarm aloft and are radar-guided through fog or darkness to intercept and



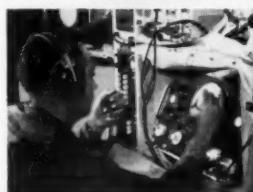


LEFT—EARLY-WARNING RADAR PATROL. Designated the WV-2 by U.S. Navy and EC-121 by USAF, these radar-domed Lockheed Super Constellations carry six tons of electronics and a 31-man crew. Super Constellations are ideal for this duty because of their famed all-weather stability and extremely long range.

ABOVE—ROCKET-FIRING STARFIRE INTERCEPTOR. First of the almost-automatic all-weather interceptors, the Lockheed F-94C Starfire is an example of Lockheed's leadership in the design and development of airborne electronics. This deadly defender and other interceptors will soon be supplemented by—

Farsighted Pentagon planning and recent amazing technological developments by U.S. science and industry are rapidly making our nation's TOTAL DEFENSE system the most formidable in all history.

Lockheed's role in implementing our new Weapons System concept and in Systems management, is an important one. Thousands of Lockheed military aircraft, of nine widely different types, are already in service. Other advanced planes, missiles and electronic guidance devices are in production, undergoing tests or on the drawing boards at Lockheed. And Lockheed's pioneering leadership in design and development of airborne electronics will continue to contribute heavily to TOTAL DEFENSE.



STILL-SECRET F-104 SUPERSONIC JET FIGHTER. (Photo not yet released.) A high-ranking USAF officer said of the F-104: "This is a fighter pilot's dream. We feel confident that it is the fastest, highest-flying fighter in the air, anywhere."

THREE PHOTOS AT LEFT show crew members of Super Constellation early-warning plane at work. (Top) Navigator plotting a fix; (center) observers at radar consoles plotting altitude, speed and course of unidentified aircraft; (bottom) fighter-director charting position and path of approaching aircraft.

Lockheed

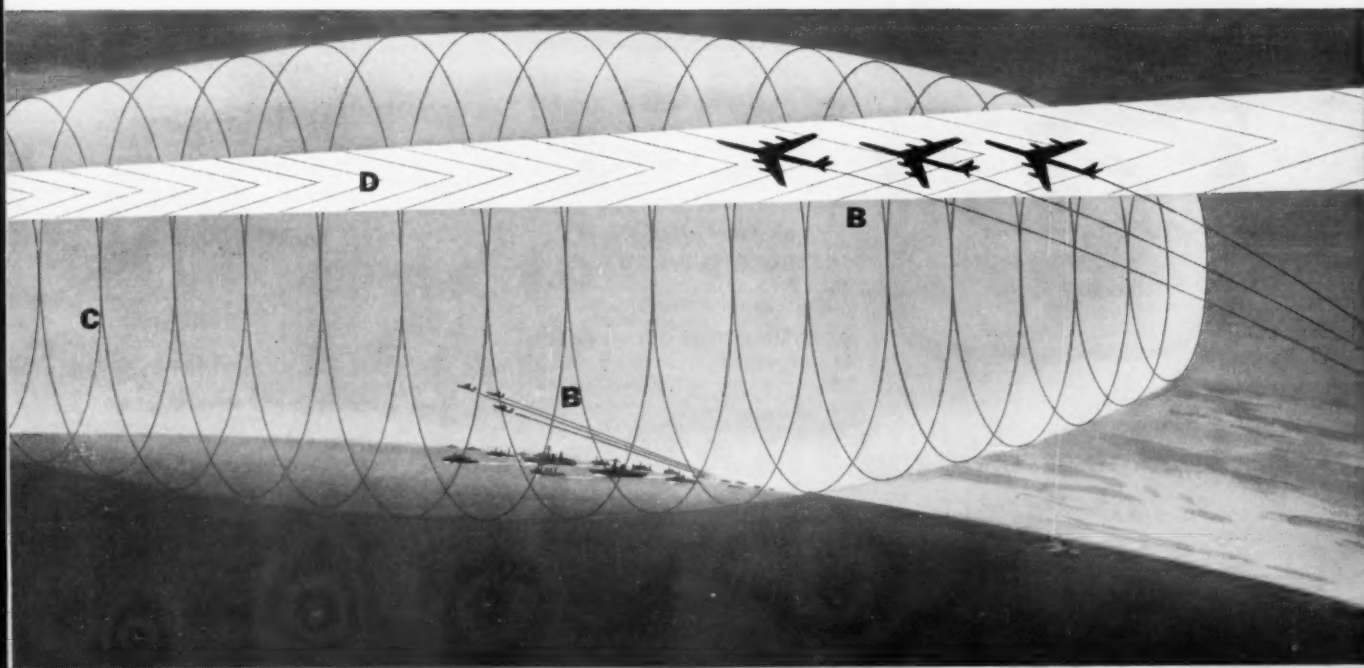
AIRCRAFT CORPORATION

California Division, Burbank, Calif.
Georgia Division, Marietta, Ga.
Missile Systems Division, Van Nuys, Calif.
Lockheed Air Terminal, Burbank, Calif.
Lockheed Aircraft Service, Burbank, Calif.

LOOK TO LOCKHEED FOR LEADERSHIP

destroy the attackers with high-speed rockets or missiles. Any enemy aircraft penetrating our barrier patrol areas would be detected by shore-based radar stations (F) and Ground Observer Corps outposts continuously manned by patriotic civilians helping to keep our nation free.

A CAREER IN MILITARY AVIATION ASSURES A FINE FUTURE FOR YOUNG MEN OVER 17. SEE YOUR NAVY OR AIR FORCE RECRUITING OFFICER.



FOR 100% CARGO CONTROL to EUROPE-NEAR EAST



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Sky Trader**

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ROME
ATHENS
ISTANBUL
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TEHERAN
BEIRUT
TEL AVIV
DAMASCUS
ABADAN
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KARACHI
KHARTOUM

SAS
SCANDINAVIAN
AIRLINES SYSTEM

Your shipping manager is on top of every order, when you ship via SAS. He can tell you instantly *where* any cargo is at any moment, and *when* it will arrive—because SAS makes firm reservations from *departure* to *destination* aboard scheduled flights to all points.

SKY TRADER SERVICE to Germany, Scandinavia, all Europe, Near East, Asia, Africa. Departures from New York.

RECOMMEND SAS SKY TRADER to your shipping manager—for speed and satisfaction—for 100% cargo control.

638 Fifth Avenue, New York City

**CARGO RESERVATIONS AT YOUR AGENT OR
SCANDINAVIAN AIRLINES SYSTEM**

PAGE 12—AIR TRANSPORTATION—Air Commerce

United States Airlines

CONGRATULATIONS

American: David A. Highman, 10-year veteran of AA, appointed staff manager-commercial and military air freight . . . J. B. Montgomery elected vice president - maintenance, succeeding Vice President Marvin J. Whitlock who now heads a new division

to concentrate on operational planning for future aircraft . . . Manly Fleischmann elected a director of the airline.

Bonanza: Robert J. Sherer, long-time CAB air transport examiner, appointed assistant treasurer of the airline.

Braniff: Robert Booth named district sales manager for Los Angeles, lower California, and Arizona . . . Stevan Olds and Richard Carr appointed to the respective posts of district sales manager and operations manager in Washington . . . Norman Kidd named city sales manager in New York City . . . Clyde Knudson now serving as Dallas city representative . . . Phyllis Haggerty appointed publicity representative in New York.

Eastern: Thomas F. Armstrong, president, appointed chairman of the Airlines Division of the New York City Cancer Committee's 1956 April Crusade.

Northwest: James C. Hackley, after five years in the Orient, has returned to take over the post of agency and interline representative for the Detroit area.

Pan American: Robert B. Murray, Jr., and A. J. Kelly elected to the respective offices of vice president and vice president-Europe . . . John C. Pirie elected associate general counsel.

Riddle: Frederick R. Merritt appointed administrative assistant to Vice President-Sales Charles L. Hood . . . George L. Rush named executive assistant for foreign operations . . . George W. Wimberly promoted to Central Florida manager . . . Jack Morris appointed superintendent of maintenance.

Slick: John E. Muhlfeld, former president of Airwork Atlantic and prior to that general sales manager of Pan Am, appointed vice president of the all-cargo airline . . . R. Dixon Speas engaged as management consultant.

TWA: E. O. Cocke and A. V. Leslie advanced to the respective offices of senior vice presidents of sales and finance . . . Clyde S. Fullerton and Frank E. Busch, general managers of sales and operations, elected vice presidents . . . New regional vice presidents: C. E. McCollum, Central Region; Louis P. Marechal, Atlantic Region; Richard Mazzarrini, European Region; Joseph W. Letzkus, Middle and Far East Region; Arthur L. Stewart,



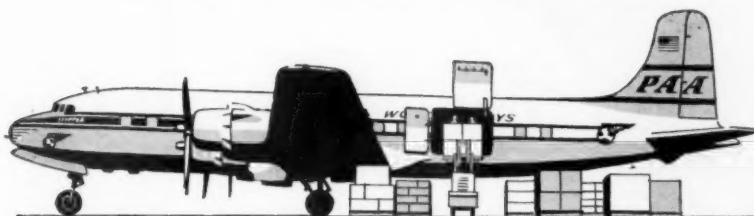
Highman
American



Muhlfeld
Slick

ALL-CARGO FLIGHTS EVERY DAY

of the working week
to and from EUROPE



... and at Pan Am's reduced rates
— savings up to 53%

By offering these 6 all-cargo flights, plus more than 40 scheduled cargo-passenger flights weekly to major cities of Europe, *Pan American provides by far the greatest air cargo lift offered by any transatlantic airline.*

Departures to Europe are scheduled to serve Shannon, London, Amsterdam, Brussels, Hamburg, Frankfurt, Nuremberg, Dusseldorf and Munich.

Only the World's Most Experienced Airline offers all these:

- 6 all-cargo flights each way across the Atlantic each week
- A space reservation system for your shipments
- Simpler cargo tariffs
- Less red tape
- Broader commodity descriptions
- More cargo space than any other transatlantic airline
- Lower transportation charges
- Pressurized DC-6As, and C-54s
- No value restrictions

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For our *free* new book, "There's Profit in the Air with Clipper* Cargo," write P. O. Box 1790, New York 17, N. Y.

*Trade-Mark, Reg. U. S. Pat. Off.

Leader in Overseas Air Cargo—

PAN AMERICAN

WORLD'S MOST EXPERIENCED AIRLINE

MAY 1956—PAGE 13



**A PILOT
TO SPEED
YOUR
AIRSHIPMENTS**

Case History of an AEI Golden Rocket Shipment. From New York to London . . . the Route that Routs Delays!

Golden Rocket Service is AEI's latest plan to increase air cargo through its cost-cutting, delay-cutting procedures.

Now a successful pilot venture in the Newark-New York area . . . but soon to be extended to gateway cities throughout the country . . . it saves a day and **OFTEN TWO FULL DAYS** on air movement to Europe and the Middle East!

Here's a minute-by-minute account:

FILM TO LONDON:

Shipper called for pickup (E.S.T.)	9:00 a.m.
Pickup at shipper's door	10:00 a.m.
Departed for Idlewild	12:00 noon
Arrived at Idlewild	1:00 p.m.
Processing, including custom clearance, completed	2:00 p.m.
Flight departed	5:30 p.m.

NEXT DAY

Arrived London*	8:45 a.m.
Consignee notified	12:00 noon
Shipment cleared through English customs	Consignee Cleared
Total elapsed time (from shipper's call to consignee's hands)	

*Greenwich Mean Time

22 HOURS

No additional cost for this service, either. And no cost or obligation for full details. Find out how you can use this service to speed your shipments . . . **AT AEI'S FAR-LOWER-THAN-AIRLINE-RATES!** Send for AEI folder, "The Rocket That Shrinks An Ocean." Call or specify Air Express International for this speedy, low-cost service!



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not affiliated with any other air express company*

(Continued from Page 12)

Pacific-Orient Region; and R. E. Montgomery, Western Region.

United: R. L. Mangold, cargo veteran, advanced from superintendent of cargo sales to manager of cargo sales . . . Glen G. Magnuson appointed manager of sales development . . . John J. Dierssen named manager of sales incentives . . . Donald H. Hansen appointed regional claims manager in the Insurance Division, Chicago . . . William D. Ferguson named manager of personnel relations and development . . . D. Walter Swan appointed regional affairs manager in Michigan and Ohio.



Magnuson
United



Mangold
United

Foreign Airlines

Air France: Guy dal Piaz appointed inspection and control manager of the North, Central American and Caribbean Division.

El Al: Sidney Rubinfeld, New York district sales manager, promoted to United States sales manager.

Japan: Jitsuro Kobayashi, who has held several responsible positions with the airline, elevated to San Francisco district manager.



James
Sabena



Kobayashi
Japan

KLM: William P. Ferree, formerly with United, named West Coast public relations manager for the Dutch airline.

Sabena: Joseph James promoted to cargo sales manager for the New York district.

Export & Traffic

National Plastic Products Co.: Howard S. Ortgies, formerly assistant sales manager, appointed export manager.

Aircraft & Aircraft Equipment

Air Logistics: L. R. "Mike" Hackney, top-ranking air cargo research and development figure, named assistant to the president.

(Concluded on Page 20)

Why Household Goods Fly

INTERNATIONAL shipments of furniture and household goods are taking to the air with increasing frequency. Why? Very simple. A matter of dollars and cents. Basic costs and hidden costs often combine to present a persuasive sales argument in favor of transport by air.

Let's see . . .

Seaboard & Western Airlines, scheduled transatlantic air freight line, recently produced a study of the handling and packing of household goods for shipment between the United States and Western Europe. In it the following significant points were highlighted:

Time: Surface shipping requires weeks; air freight figures shipping time in terms of hours.

Physical handling: From time of acceptance to time of delivery, careful handling is an accepted fact.

Damage: Salt-water corrosion is unknown to air shipments. The smooth ride inherent in air transportation is in contrast to "the terrific stress and strain placed on them (the household goods) in the hold of ocean vessels." Nor does the shipment encounter the bumping and jostling during the loading and unloading of ships.

Weight: Important savings are obtained because, unlike in surface transportation, the freight can be airlifted uncrated, effectively protected by pads.

Insurance: The rates are considerably lower for air than for ocean shipping. All-risk door-to-door insurance rate for air carriage is 24¢ per \$100 declared valuation; ocean transportation charges, with less coverage, is about \$1.40 per \$100.

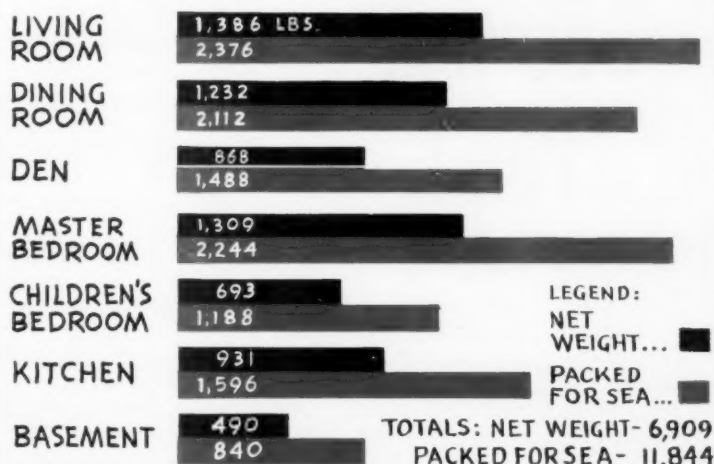
Pilferage: The rate is fairly high for ocean carriers; the airlines encounter little or none.

The preceding often are translated into important economies (not taking into account the hidden advantages). One such example is provided in Sea-

(Concluded on Page 30)

WEIGHT COMPARISON OF HOUSEHOLD GOODS FOR A FAMILY OF THREE OR FOUR

Source: Seaboard & Western Airlines



COMPARATIVE COST ANALYSIS FOR SHIPMENT OF HOUSEHOLD GOODS FROM NEW YORK TO PARIS

Source: Seaboard & Western Airlines

4,000# Net Weight—Value \$4,000

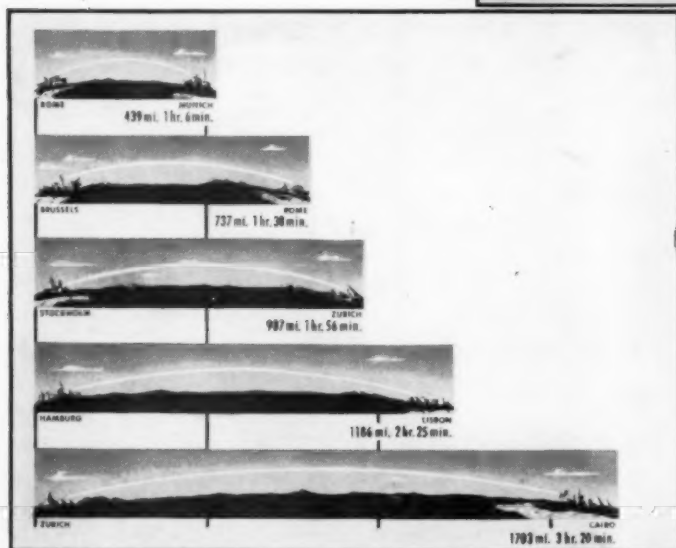
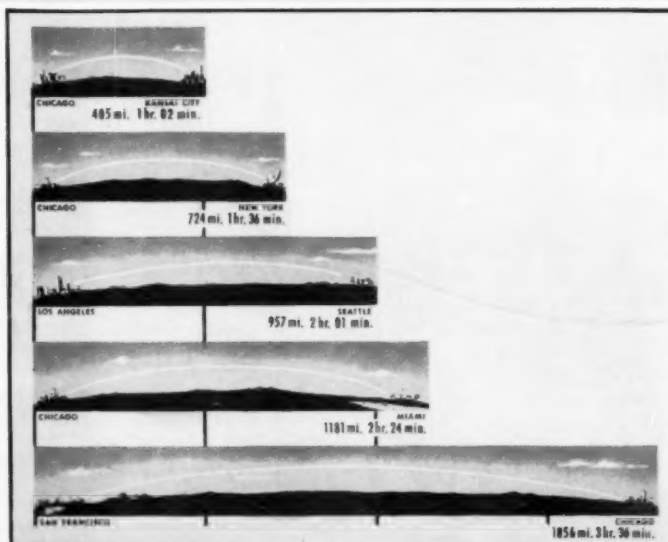
AIR			SURFACE		
Item	Rate	Cost	Item	Rate	Cost
Packaging for Van and Air Haulage.....	\$3.62 per 100#	\$144.80	Preliminary Packing for Van.....	\$3.62 per 100#	\$144.80
Residence to Airport.....	16.00 per hr.	96.00	Packing & Crating plus Cartage (Home-Warehouse-Pier) (6500# Gross).....	8.50 per 100#	562.50
Documentation.....		2.00	Documentation.....		15.00
Air Freight—4,000#.....	.40 per lb.	1,600.00	Sea Freight—720 Cu. Ft.....	1.15 cu. ft.	828.00
Delivery—Airport to Residence.....	12.50 per hr.	50.00	Pier Pickup—uncrating and loading.....	2.38 per 100#	154.70
Unpacking.....		70.00	Cherbourg/Paris.....	3.75 per 100# net wt.	150.00
Insurance.....		9.60	Insurance.....	1.30 per \$100 Val. plus excess for fragile items	152.00
Total Cost.....		\$1,972.40	Total Cost.....		\$2,007.00



600 mph Plus!

TOUTED as the "fastest commercial airplane in the world," the *Skylark 600* is America's newest entrant in the Jet Age.

The manufacturer—Convair Division of General Dynamics Corporation—announced that the jet aircraft, built for medium-range transportation, would operate from 5,000-foot runways and cruise at 609 miles an hour. It is being offered for early-1960 delivery, and several airlines are



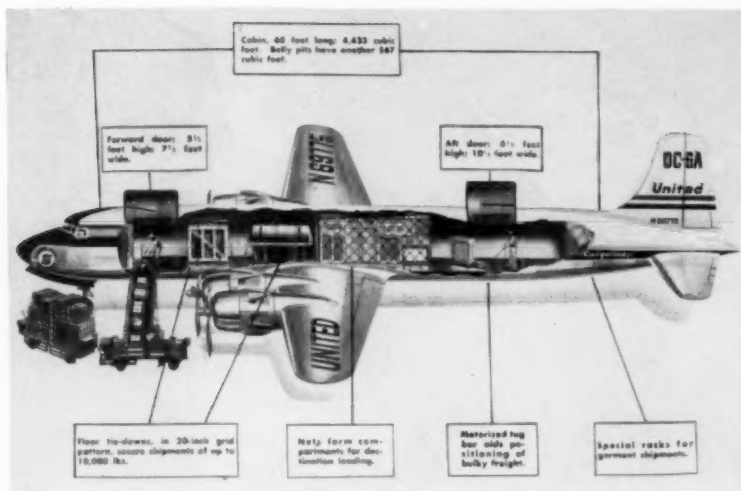
reported to be negotiating with Convair. Cost of the *Skylark 600* is in the neighborhood of \$3.3 million.

Convair stated that on trips of 500-mile lengths, the swept-wing jet's block (ramp-to-ramp) speed will be 413 miles an hour; on 1,000-mile flights, 470 miles an hour; and 1,500-mile hops, 504 miles an hour. J. G. Zevely, director of sales and contracts, emphasized that the new transport will "perform economically over all the major routes of every scheduled airline."

The *Skylark 600* is designed to haul both passengers and cargo. Cargo payload with a full payload of 99 passengers is 6,400 pounds; cargo hold will have 850 cubic feet of capacity.

The charts on this page respectively show the elapsed time from loading ramp to loading ramp, between key cities within the United States and within Europe.

CUTAWAY of one of United Air Lines five ordered DC-6A airfreighters which the coast-to-coast carrier will receive this Spring and Summer. Payload exceeds 30,000 pounds. The DC-6As will join United's fleet of 10 DC-4 airfreighters and 179 combination transports which the airline will have by the end of the year. Writes Blatt: "Carrier experience with the DC-6As indicates that the direct operating costs of the DC-6A per ton-mile are approximately 20% lower than those attainable with the C-46 and DC-4, and these costs may decline even further when fleet quantities are in operation." It is being watched closely.



Volume Shipments Will Turn the Trick

By JOSEPH D. BLATT

*Assistant Administrator of Civil Aeronautics
Civil Aeronautics Administration*

THE term "civil air cargo" as used in this article includes the domestic air express and air freight carried within the continental United States by the scheduled airlines, the certificated all-cargo carriers, and large irregular carriers. It does not include air mail, personal baggage, or defense contract cargo operations.

Even though air cargo has been an integral part of our air transportation system almost from the inception of the system, prior to World War II air express was the only type of cargo service offered. The rates for air express were too high to attract anything but specialized and emergency equipment.

As a result of our wartime experience in flying many types of cargo which had formerly not been considered suitable for air transport, the scheduled airlines decided to offer a freight service designed to attract large-sized shipments at lower rates than were offered by air express. In October, 1944, American Airlines filed the first air freight tariff. From that date air freight has become an important source of traffic for air carriers. All-cargo planes, as well as combination passenger-cargo planes, were placed in operation. Rates were steadily reduced and new cargo flights added. Sales promotion was stepped

up to make the public air cargo conscious and to increase volume. Stimulated by these developments, the volume of air cargo expanded sharply

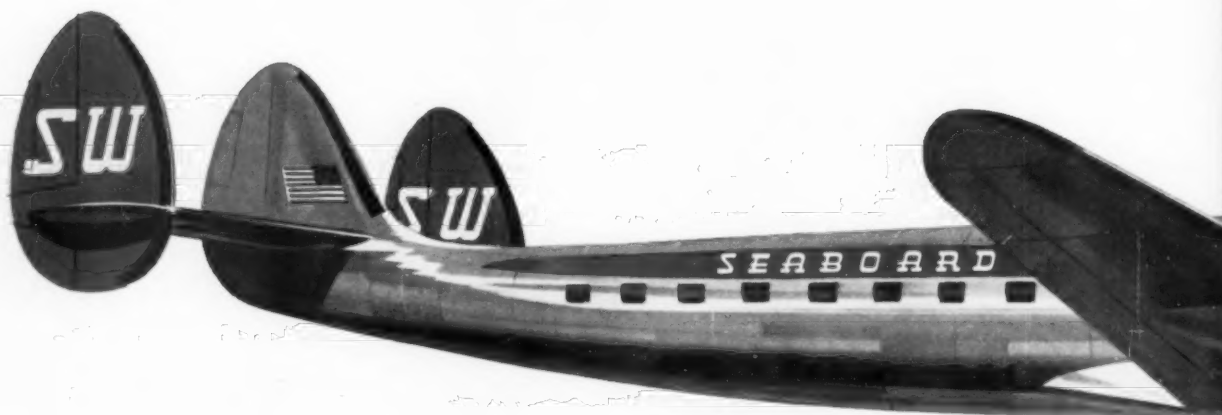
from some 22 million ton-miles in 1945 to 83 million ton-miles in 1946.

Table I shows that domestic air
(Continued on Page 28)



FLORIDA-GROWN TOMATOES—4,000 pounds in this shipment sent by the Chester Tomato Company, Miami—are loaded into a Riddle Airlines cargo plane, consigned to the Cleveland Marketing Company, Cleveland. "It is quite obvious," the author writes, "that the future development and expansion of air cargo lies in attracting volume shipments."

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CONGRATULATIONS

(Continued from Page 14)

Minneapolis - Honeywell: Elden H. Olson appointed director of engineering for the Aeronautical Division.

Materials Handling Equipment

Hyster: Raymond L. Howerton promoted to assistant manager of the Sales Promotion Department.

Yale & Towne: Garnett A. Vining appointed Western Region sales manager of the Materials Handling Division.

Miscellaneous

Air Transport Association: Warren N. Martin elected vice president-public affairs.

Aircoach Transport Association: A. J. Rome elected president, succeeding H. B. Johnston who resigned.

Civil Aeronautics Board: Ross I. Newmann appointed chief of the International and Rules Division, Office of General Counsel . . . Grace M. Biermann named acting chief of the Public Information Section, succeeding Edward E. Slattery, Jr., who has been transferred to the Hearings and Reports Division of the CAB's Bureau of Safety Investigation.

National Aeronautic Association: Harry P. Guggenheim elected an Elder Statesman of Aviation by the board of directors.

Port of New York Authority: George M. McSherry elevated to the post of assistant general manager of the four metropolitan airports operated by the Authority.

SERVICES

Air France: Super G Constellation service into and out of Boston now is on a two-a-week basis. Departures for Paris are every Thursday and Saturday. In June the frequency will be upped to four a week.

American: DC-6A airfreighters now operate daily, except Saturday and Sunday, between New York and San Francisco, with westbound stops at Detroit and Chicago, and eastbound stops at Chicago, Cincinnati, Washington, and Boston. Service between Chicago and San Francisco is nonstop. AA operates seven DC-6As, in addition to other cargo planes.

BOAC: Effective May, the British airline operates 18 flights a week between the United States and Great Britain, seven between the United Kingdom and Canada, and two between the United Kingdom and the Caribbean . . . Detroit is scheduled to be added as a port of call on May 2 with the arrival of a *Stratocruiser* from London. It goes on to Chicago, then returns the same day for the flight to London.

Delta: Service to Charlotte, Baltimore, and Philadelphia on its Atlanta-Washington-New York runs was inaugurated last month . . . Free helicopter service between Newark, La Guardia, or Idlewild Airports is now available for connecting (first-class) passengers. New York Airways is the connecting carrier.

KLM: The Dutch airline will operate three transatlantic services a day from New York during the Summer season. Of the total of 24 flights each week, three will be all-cargo.

Northwest: Effective April 29, the air-

line operates 18 flights daily from Minneapolis-St. Paul to Chicago, and nine from Minneapolis-St. Paul to New York. There are now five transcontinental flights between New York and Seattle or Portland.

Scandinavian: Operations to and from the Soviet Union on a three-a-week schedule will be inaugurated soon. SAS will connect Stockholm, Copenhagen, and Oslo with Moscow, via Riga. Approximate flight times: Stockholm-Moscow, five hours, 40 minutes; Copenhagen-Moscow, six hours, 50 minutes. No flight time was given for the Oslo-Moscow route. Swedish-built *Scandias* will be flown.

Sabena: The Belgian airline has stepped up its North Atlantic service to one daily. After June 22 the weekly frequency will be 10 in each direction . . . A Brussels-Palma de Mallorca service has been opened . . . Newest helicopter run out of Brussels is to Dortmund, West Germany.

Western: May 1 is the inaugural date of WAL's San Francisco-Denver service via Salt Lake City. DC-6B equipment will be operated.

RATES

■ TWA has filed a tariff with the CAB which, when authorized, will establish a coast-to-coast "special air freight" service at reduced rates. Slower than normal air freight service, but faster than surface transportation, it would provide for delivery of shipments on the fourth morning after receipt at origin. Westbound rate will be 65% of the minimum rate; eastbound, 55%. S. E. Russ,

AIR FREIGHT FOR AUSTRALIA...OR POINTS WEST?



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Australia's

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director of cargo sales, said that a simplified tariff, with a single rate for all commodities and a minimum weight of 100 pounds, will be applied. Hope is to draw away more of the business now handled by surface lines.

Slick Airways has hacked its \$4.00 minimum charge to \$1.00. Charles F. Dworshak, director of sales and traffic, also reported that the all-cargo airline has filed for lower rates per pound on packages of from one to 100 pounds.

COMMERCIAL AIRCRAFT

Between August and December, Swissair's seven Convair 240s will be acquired by Mohawk Airlines, New York local service carrier. The 240s will give way to the bigger Convair 440 *Metropolitans* which Swiss-

air has purchased.

Lufthansa has ordered four extra-long-range Lockheed 1649A *Super Constellations* (range capability, 6,400 miles) Scheduled for delivery in early 1958, the big transports will be placed in nonstop service between New York and Dusseldorf and Frankfurt. The German airline also reported that it has ordered "seven to nine" Vickers *Viscount* turboprops which will operate on its planned Europe-Middle East routes. Delivery is expected during late Summer in 1958. The route will be opened with *Super G. Connies*.

Scandinavian Airlines System recently took delivery of its first Convair *Metropolitan*—the first of a fleet of 11. Delivery will continue through the Spring and Summer, with the eleventh scheduled

to be received in September. SAS's first *Metropolitan* goes into service in Europe on May 15.

New York Airways reports that it is intensely interested in the Bell D216, a 24-passenger helicopter powered by three turbine engines.

According to The Frye Corporation, its F-1 *Safari* freighter (see November, 1955 *AT*) will haul up to 12,000 pounds of cargo at direct ton-mile costs of 10¢ to 11¢ over short-range routes. This would be twice the maximum payload of the venerable DC-3, Frye says. Over a 1,000-mile route, the cargo plane will carry a payload of more than 9,000 pounds. It has two truckbed-height loading hatches. Clamshell nose door is 106" x 75"; side door is 76" x 75". Volume of cargo compartment is 2,513 cubic feet. The company asserts that the *Safari's* built-in cargo handling features will cut costs of 50% to 70% when compared with current methods widely used. The company, headed by Jack Frye, well-known air transport figure, is offering the *Safari* in four different versions: all-cargo, all-passenger, cargo-passenger, and executive-utility. Northern Consolidated Airlines and Wien Alaska Airlines have placed orders for this transport.

LIVE CARGO

Four Pan Am cargo planes hauled a total of 520 Canadian-bred Dusty White sheep (66,000 pounds) from Miami to Ciudad Trujillo, Dominican Republic. Sheep, raised in Ontario, Manitoba, and Alberta, were ship-

ped by rail to Miami by Hays Farms, Oakville, Ontario. Consignee: Oficina Particular del Generalissimo. Pan Am kept the woolly creatures in aluminum corrals; 10 pens, double-decked. Pens were installed and payload of animals (a little more than 120) herded into them in about an hour.

United States Airlines

FACTS & FIGURES

Braniff: Dividend of 15¢ per share on the 1,842,574 shares of common stock outstanding was paid April 20.

Flying Tiger:

First six months of the 1955-56 fiscal year showed a gain of 85% in gross revenues and a profit of \$660,773. Same period a year ago showed a loss of \$364,392. Tiger flew 30,903,701 ton-miles of freight (101% over last year's like period) in domestic and overseas operations. Semi-annual dividend was declared at 25¢ per share on the Five Percent Preferred Stock, Series A, payable July 16 to stockholders of record May 31, 1956 . . . Freight traffic for the month of February was 35% above the February, 1955 figure (5,382,842 ton-miles, compared to 3,990,411 ton-miles).

New York: The helicopter airline in 1955 showed a total of 473,785 pounds of freight airlifted (359,360 pounds in 1954) and 1,758,534 pounds of express (159,450 pounds the year before). Company showed an increase in net profit of 52%.

Northwest: 1955 report shows that the airline's express, freight, and excess bag-



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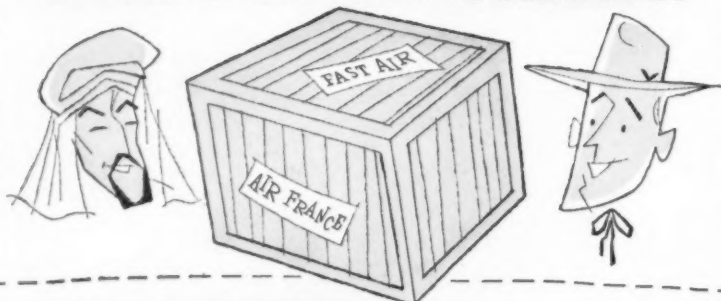


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gage revenues (\$6,123,606) was up 15.6%.
Net income of NWA was \$2,116,180, a
slight drop from the previous year.

Pan American: Transatlantic cargo
business in the first quarter of 1956 is
reported to be 61% above the correspond-
ing period a year ago. Total carried be-
tween the United States and Europe was
2,014,269 pounds (1,252,661 last year) . . .
During February, 3,016,081 pounds of
Latin American cargo moved through
Miami—a new company record for a
single month. Exports amounted to 1,843,-
755 pounds; imports, 1,172,326 pounds.

Panagra: A total of 413,600 pounds of
cargo was carried in the first two months
of 1956. This represented a gain of 59,600
pounds over January-February, 1955. Cargo
ton-miles flown in January more than
doubled the January, 1955 figure.

Seaboard & Western: The all-cargo
airline showed record earnings for 1955—
\$1,967,369 after taxes. Revenues (\$18,-
479,000) almost tripled those of the pre-
vious year . . . During February, Seaboard
flew 1,005,652 ton-miles, an increase of
70% over the ton-mileage in February,
1955.

TWA: Revenues for 1955 amounted to
\$217,431,000—a new company record and
7% above the 1954 total. Net income was
\$5,407,000, in contrast to \$10,336,000 the
year before.

United: March 27 turned out to be the
airline's best freight day in company
history when a total of 194,746 ton-miles
was flown. Previous all-time high, set
August 24, 1955, was 185,064 ton-miles.

Foreign Airlines

Avianca: Net income in 1955, after
taxes, was \$1,122,968. Total revenues, an
all-time high, were \$36,538,000.

Trans-Canada: Net income last year
was \$190,095. Freight (\$3,352,593) and
express (\$1,929,598) revenues showed a
combined gain of 30% over the previous
year.

Indirect Air Carriers

Emery: Net income, after taxes,
amounted to \$370,673 last year, equivalent
to \$1.11 per share on 333,600 shares out-
standing. Previous year's net was \$141,928,
equivalent to 44¢ per share on 325,800
shares.

Aircraft Manufacturers

Lockheed: For the third successive
year, Lockheed led the world in dollar
value and aircraft weight exported. Fifty-
six percent of Lockheed's commercial
planes were delivered to foreign airlines.
Aircraft and parts exported in 1955
reached \$66,490,000. Including both do-
mestic and export, the company built and
delivered more commercial aircraft than
any other manufacturer. Fifty-five civil
transports were produced; the total of
military transports was even higher. Lock-
heed exported twice as many airliners as
any other American manufacturer.

Martin: Earnings, after taxes, were
\$13,285,297 last year, equivalent to \$4.92
per share.



**Air freight han-
dlings at Seattle-
Tacoma Airport in
February totaled 2,-
182,385 pounds, as
compared with 1,-
929,319 in the same
month a year ago.
Air express han-
dlings also showed a
substantial increase**

—203,899 pounds as against 161,333 pounds. Seattle-Tacoma's total enplaned and deplaned freight and express tonnage from 1950 through 1955 presents a satisfactory picture. With the exception of 1951, when there was a slight drop in freight handlings from the previous year, the upward trend has been steady. Last year it was substantially more than double the 1950 total. Express handlings in 1955 were lower than they were in 1950, but higher than the previous year's total. The peak for the 1950-55 period, as far as express is concerned, was in 1951.

NEW OFFICES

Air France
Philadelphia —
1422 Walnut Street;
Felix Ménage, district manager.

Japan
New York — 620
Fifth Avenue (tickets only).

Lufthansa

Los Angeles —530 West 6th Street;
John H. Monks, manager.

CHARTER

Recent word from London points up expanded cargo offerings across the North Atlantic in both directions. A sizable part of the offerings involved marine and industrial machinery, with various livestock loads noted. As for transatlantic passenger charter enquiries, these are following the normal seasonal upswing. Most of the enquiries from Continental sources concern tourist charters, reports indicate.

MAIL

The certificated air freight carriers won an important victory recently when they were authorized by the Civil Aeronautics Board to haul mail on a non-subsidy basis for a period of one year. CAB's position was revenue will enlarge the opportunity of the carriers involved—Slick, Flying Tiger, Riddle, and Aaxico—to offer effective competitive service, as well as serve the public interest. (See CAB in this issue.)

MILITARY AIRCRAFT

A record Spring airlift undertaken by the Royal Canadian Air Force found four C-119 Flying Boxcars as part of the three-week round-the-clock operation. Purpose of airlift was to haul more than 1¼ million pounds of food, fuel, and equipment from Resolute Bay on Cornwallis Island to five northern Canadian-American weather stations. Among the cargo items were prefabricated buildings, fuel and lubricants, helium for weather observation balloons, heavy equipment, and fresh and frozen foods. Personnel were airlifted also.

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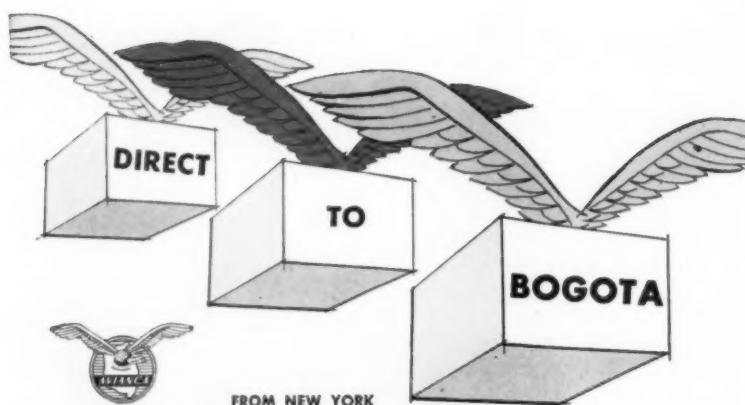
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Twice weekly turboprop cargo flights, operated between Kelly Air Force Base, Texas, Charleston Air Force Base, South Carolina, and Ramey Air Force Base, Puerto Rico, are reducing by approximately 50% the flying time required by conventional transports. The schedule, operated by the Military Air Transport Service's 1700th Air Transport Group, is a continuation of the service testing of turbine-propeller powered transport aircraft for the United States Air Force. The twice weekly schedule is flown in two four-engine Boeing YC-97J turbopropfreighters with Pratt & Whitney T-34 turboprop engines driving the Curtiss electric propellers. The YC-97J is a slightly modified version of the Air Force C-97 Strato-freighters. The turboprop engines increase the power over the standard C-97 by more than 60%.

On a recent flight, one of the turbopropfreighters picked up a 25,000-pound payload in Charleston and delivered it to Ramey, some 1,300 miles away in four hours and 15 minutes, about three hours under normal four-engine time. Among the high-priority cargo aboard were four General Electric J-47 jet engines and other vital material for the Caribbean base. On the return trip to Brookley Air Force Base, Alabama, the YC-97J carried a 14,000-pound payload of cargo.

At the present time, the 1700th Test Squadron of MATS' Continental Division is conducting service testing on two YC-97J's and two four engine Lockheed YC-121F *Super Constellation* turboprop transports to obtain operational information on the new-type power plants. The YC-121F is equipped with the Pratt & Whitney T-34 engine and Hamilton Standard Propellers. This unit had previously serviced-tested and proven the turboprop power combination of the Allison T-56 engine and the Aeroproduct propeller in two twin engine Convair YC-131Cs—the same power combination that will be found in the Lockheed *Electra*. The powerplant used on the YC-97J's and YC-121F's will power the all-cargo turboprop transport, the Douglas C-133, a 12-plane fleet of which MATS is slated to have by the end of next year.

The scheduled turbopropfreighter operation into the Caribbean covers close to 5,000 miles in less than 15 flying hours. Normal flying time for this route in a four-engine conventional transport is in excess of 30 hours, MATS said.



Morton Brautman, associated with the organization since its inception, has been elected president of Pan Maritime Cargo Service, Inc. Other elected officers include Herbert J. Pardo, manager of Pan-Maritime's office in Caracas, who takes over the post of first vice president and treasurer; and Herbert Wolfson, second vice president and secretary. The company, whose headquarters are at 232 Water Street, New York, also maintains offices in Miami, Chicago, and Frankfurt.

Charles L. Gallo, president of Air Express International Corp., recently winged to Europe on another of his frequent business tours. This time he covered France, Switzerland, Italy, West Germany, Holland and Belgium.

Bouquets to Peter A. Bernacki, Inc., which recently had a housewarming at its refurbished headquarters at 222 Spring Garden Street, Philadelphia. Accent is on functional modern décor. Shippers and carrier representatives attended the occasion.

Name of Airborne Flower & Freight Traffic, Inc., has been changed to Airborne Freight Corporation, according to an announcement by J. D. McPherson, president. One of the leading domestic air freight forwarding firms, Airborne is reported to be stepping up its activities in the international field. The company, formed 10 years ago, maintains headquarters at San Francisco International Airport and offices in key cities, in the United States, Alaska, and Hawaii.



The operating authority of Slick Airways and Flying Tiger Line has been renewed for another five years. Another decision to come out of the Air Freight Renewal Case was the authorization of Slick, Tiger, Riddle, and Aaxico to perform mail carriage services on a non-subsidy basis for one year (see *Mail in this issue*).

Delta Air Lines has won the recommendation of CAB Examiner Thomas L. Wrenn to serve the heavy-traffic route between Miami and New York/Newark. Route would be via Tampa/St. Petersburg, Jacksonville, Brunswick, Savannah, Augusta, Columbia, Charlotte, Fayetteville, Greensboro / High Point / Winston-Salem, Washington, Baltimore, and Philadelphia. Seven other airlines had sought the so-called "plush route" to compete with Eastern and National.

A. J. Rome, president of the Aircoach Transport Association, has asked CAB authority for ACTA member carriers to fly international freight generated by forwarders.



A new light-weight corrugated box designed to hold 18 hangers as well as three to five droplets for each hanger has been introduced by Slick Airways. New container, which will hold up to 100 pounds of merchandise, enables garment shippers to send their consignments to destination without folding and packing. The customer, of course, is virtually ready to sell the merchandise the moment he receives it. Unpacking and repressing procedure is eliminated. The box—it sells for \$1.50; less for quantities—is said to protect garments against moisture and dust.

According to the St. Regis Paper Company, New York, packing vegetables moisture-fresh from the field, fruit newly-picked from the tree, and freshly-frozen meats and poultry in light-weight containers may be made easier as the result of its new expanded plastic container now in the advanced development stage at the company. This new container, in which paper and foam plastic are combined and produced in continuous form, retains high



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compression strength under conditions of severe humidity, the company states. Packers have long faced the problem of finding a container which was light enough in weight to keep shipping charges low and yet strong enough to withstand long-distance shipping under the high humidity conditions of refrigerator cars. This expanded plastic container developed by St. Regis meets these requirements and provides excellent insulation qualities and high moisture vapor protection, it is claimed. Work is under way to bring this development into commercial production. The expanded plastic container broadens the use of paper in those fields where wood is now being used. Applications for patents have been filed by St. Regis.

Towmotor Corporation, Cleveland, Ohio, has just released three colorful and informative four-page brochures covering its line of fork lift trucks, tractors and accessories (see illustration), to help busy executives who are concerned with materials handling problems keep up with new developments in materials-handling equipment. In addition to showing the latest in the company's line of materials handling equipment, one folder in the new literature series gives standard specifications on all Towmotor fork lift truck models now in production. The other two folders outline important phases of engi-



neering research and development related to Towmotor accessories. One of these covers the wide variety of standard accessories now available for Towmotor fork lift trucks which enable the lift truck operator to grip, clamp, grab, or support practically any type of load; and lift, transport, unload, deposit, dump, upend or completely revolve it. The third folder which illustrates and describes typical examples of non-standard, custom engineered acces-

sories and equipment, designed to meet specialized handling problems in specific industries, also explains the exact manner in which Towmotor special-engineering facilities are now available to companies as an aid in solving difficult materials handling problems. (See Come 'n' Get It, Item No. 178.)

Clark Equipment Company, Battle Creek, Michigan, has opened its new Materials Handling Development Center, set up in its own 20,500-square foot building for the purpose of developing materials handling methods for individual industries. Facilities are available to set up mock demonstration areas typical of most industries. Space is available for small seminar groups as well as large-scale industry-wide sessions. Among the projects to be undertaken by the center is a study of airline freight and passenger-handling in the jet age. Sponsor of the project is Robert H. Davies, vice president of Clark's Industrial Truck Division.

Thomas E. Braniff Room Is Dedicated

NEW YORK—World Brotherhood dedicated its Thomas E. Braniff Room last month as a "center for promoting good will and understanding among all the people of the free world." The room, which now serves as American headquarters of World Brotherhood, was named for the late president of Braniff International Airways, who was a founder of the World Brotherhood organization and also served as national Catholic chairman of the National Conference of Christians and Jews. In the dedicatory ceremony, Charles E. Beard, president of Braniff, presented the room to World Brotherhood and the National Conference of Christians and Jews.

New Riddle Office Under Construction

JACKSONVILLE—A 50' x 100' office-warehouse is under construction for Riddle Airlines at Imeson Airport here. Peter T. Craven, executive vice president, revealed that a five-year lease between the city and Riddle specified 60,000 square feet of ramp, plus an equal amount of adjacent land area for facilities. The all-cargo line has been operated from temporary offices since it inaugurated service into Jacksonville the beginning of this year.

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BOOKS

In the realm of science fiction we have **Deep in the Sky**, by Helga Nielsen (Exposition; 161 pages; \$3.00), a tale of an in-flight pilot who is mysteriously transported to another planet. How does the earthman adjust himself to life in another world? That's the story—plus love, action, and a sort of lesson to us earthlings. . . . In the same sphere of fiction is Stanley Zuber's **The Golden Promise** (Pageant Press; 127 pages; \$3.00); but in this case the author is absorbed in the world of the future—a Utopian society—pointed up by the book's title. But Zuber's dedicated description of the world of tomorrow does not neglect the battle of the sexes—a true essential, even to Utopia. . . . Since 1953 saucer reports have multiplied; thousands of sightings have been confirmed by veteran pilots, radarmen, and trained ground observers. Government investigations have been intensified; prominent engineers and scientists have been brought in to help Air Force Intelligence. Yet the Air Force has refused to release a single official report concerning flying saucer encounters. Is there a conspiracy in Washington to withhold facts from the public? Major Donald E. Keyhoe, author of **The Flying Saucer Conspiracy** (Henry Holt & Company; 315 pages; \$3.50) finds this censorship anti-democratic. If we know the "facts," he argues, we will have a chance to act wisely. This newest volume provides information on numerous claims of new saucer sightings along with earlier reports. Keyhoe, as readers well know by now, believes the saucers come from outer space.

The aircraft pilot may find himself in any of many types of emergency situations. Whatever it may be, it's a fairly safe bet that Harley D. Kysor has covered it in his **Aircraft in Distress** (Chilton Book Division; 432 pages; \$6.00). In this manual of air survival, the author covers the whole field of aircraft assistance and distress operations. Well-planned chapters relate to air search and rescue, flying safety, emergencies and evacuation, rescue aircraft interception procedures, emergency landing procedures, aircraft ditching, and first aid and survival. . . . What have we achieved thus far in the exploration of outer space? Lloyd Mallan, in his **Men, Rockets and Space Rats** (Julian Messner, Inc.; 335 pages; \$5.95) tells of the great accomplishments in rocket development, the daring tests in rocket ships, the human guinea pigs—all toward the eventual conquest of outer space. Dramatic and absorbing. . . . Bouquets to the **TWA Vacation Guide and World Atlas** (C. S. Hammond & Company; 384 pages; \$7.50)! Here's a guidebook we heartily recommend to the air traveler. All about any and every place you may want to go; the basic facts you require; maps, fine illustrations. Also includes a valuable country-by-country chart providing necessary information on climate, customs and entry requisites, tipping, money, hotels, best buys, etc.

For the science-fiction fan, here's another book with which to pass those travel hours entertainingly: W. J. Stuart's **Forbidden Planet** (Farrar, Straus & Cudahy, Inc.; 184 pages; \$3.00). Here's an action tale with plenty of zip. All the intriguing elements: an expedition from Earth to another planet to seek the survivors of a 20-year old expedition; a solitary survivor (but now the father of a beautiful daughter); mysterious influences conflict; escape. Fast, easy reading. . . . James Salter, a fighter pilot, writes tensely about a fighter pilot in his absorbing novel, **The Hunters** (Harper & Brothers; 244 pages; \$3.00). Set in Korea, the story has the unmistakable imprint of authenticity. The MIG hunters are real: their attitudes, their bar talk, their reactions in flight. Salter's central character, hopeful of acehood but unable to contact enemy aircraft, is well-drawn in his flight through fear and ultimate triumph.

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VOLUME SHIPMENTS

(Continued from Page 17)

cargo increased nearly fourfold between 1946 and 1955. The volume of air cargo handled last year by the passenger airlines and all-cargo carriers was approximately 317 million ton-miles. This was 24% more than these carriers flew in 1954 and represented the best year-to-year performance since 1950.

An examination of this table also reveals that air cargo experienced an abnormally rapid rate of growth between 1947 and 1950. This rapid growth was stimulated by the existence of shortages in the economy and the increased demand for airlift which followed the outbreak of war in Korea. Further increases were recorded in 1951 and 1952, but until last year, that is in the 1952-1954 period, the traffic remained approximately at the same level with increases in volume by the scheduled passenger airlines offset by a decline in the operations of the all-cargo carriers.

Future in Volume

It is quite obvious that the future development and expansion of air cargo lies in attracting volume shipments. Air cargo cannot grow on the basis of attracting only the more dramatic specialized shipments. The Civil Aeronautics Administration expects air cargo to continue to grow—the long-range outlook appears more promising than it has for some time, and a steady but modest pattern of growth seems

assured. Volume is expected to increase to approximately 500 million ton-miles by 1960, and to 700 to 900 million ton-miles by 1965. In view of the growth potential which is believed to exist in air cargo, *I feel these forecasts are fairly conservative.*

One of the major reasons for CAA's optimism for the continued expansion of the volume of air cargo is the improvement in the air cargo industry's equipment prospects. Up to a few years ago, the major part of the all-cargo fleet consisted of C-46s and DC-4s. We now see a trend of placing aircraft specifically designed for cargo carriage into use. Even though there are only about seven or eight DC-6As in cargo use, there are now about 13 additional DC-6As on order. Carrier experience with DC-6As indicates that the direct operating costs of the DC-6A per ton-mile are approximately 20% lower than those attainable with the C-46 and DC-4, and these costs may decline even further when fleet quantities are in operation. There are also orders for about 10 Lockheed Constellation 1049-Hs for probable domestic use.

With the introduction of aircraft with lower direct operating costs into the civil fleet, and with indirect costs expected to decrease as volume expands, there are sound reasons for believing that the uptrend in cargo rates of the past few years may be halted, and that an actual reduction from present rate levels may be economically feasible, thereby improving the competitive position of air cargo. The equipment outlook is also brightened by the possibility of civil utilization of

some of the promising aircraft now under military development. The C-130A, C-132 and C-133 all look promising cost-wise and may permit lower rates when and if placed in civil operations.

All-Cargo or Combination?

In any discussion of air cargo's future, some mention should be made of the controversy that exists between proponents of passenger combination aircraft and all-cargo aircraft. It appears to me that in a field as broad as the carriage of air cargo there are specific economic needs for both types of aircraft. The passenger combination aircraft and the cargo aircraft each has its advantages and disadvantages in the transportation of air cargo. In the Air Freight Certificate Renewal Case, the Civil Aeronautics Board examiner analyzed the relative advantages as follows:

Advantages of Passenger Combination Aircraft

- On an added cost or out-of-pocket basis, it is more economical than all-cargo aircraft.
- Smaller shipments can go out on more frequent schedules to more cities with fewer stops, thus permitting faster point-to-point service.
- Greater stress on schedule reliability than with all-cargo aircraft.

Advantages of All-Cargo Aircraft

- Can be scheduled to handle peak loads; i. e., between 8:00 p.m. and 1:00 a.m., whereas passenger flights are heaviest in morning, afternoon and early evening hours, and are dedicated primarily to carriage of passengers.
 - Are not restricted as to size and dimension of packages than can be handled. Passenger plane cargo holds are small and nothing can be moved on a pallet.
 - Cargo aircraft can handle all types of commodities. Passenger planes not suited for carrying commodities which may be offensive or dangerous to human life.
 - Surfer service is provided. Freight is often off-loaded or backlogged at various points by passenger aircraft.
- If air cargo potentials are to be realized, concerted action must be taken to reduce rates by reducing direct and indirect costs.

Since 1947 average air freight rates as indicated by ton-mile yields of the all-cargo carriers have progressively increased from 12.7¢ to 18.3¢. The average rate as distinguished from the reported yield is generally higher and in 1954 was about 20¢ per ton-mile.

TABLE I
DOMESTIC CIVIL AIR CARGO¹ AND CHANGE FROM
PREVIOUS YEAR, 1946-1955
(Ton-miles in Thousands)

Calendar Year	Total Ton-miles	Scheduled Combination Carriers		All-cargo Carriers		Large Irregular Carriers	
		Ton-miles	% Change	Ton-miles	% Change	Ton-miles	% Change
1946	82,593	42,593	...	19,460	...	20,540	...
1947	127,959	67,959	59.6	28,856	48.3	31,144	51.6
1948	150,767	100,996	48.6	38,567	33.7	11,204	-64.0
1949	174,481	123,677	22.5	37,634	-2.4	13,170	17.5
1950	229,039	152,327	23.2	63,599	69.0	13,113	-0.4
1951	239,310	144,188	-5.3	79,056	24.3	16,066	22.5
1952	260,477	159,514	10.6	86,447	9.3	14,516	-9.6
1953	262,169	176,428	10.6	81,923	-5.3	3,818	-73.7
1954	260,824	186,618	5.8	68,858	-15.9	5,348	40.1
1955	316,813	228,011	22.2	88,802	+29.0	3	...
1960 (Est.)	500,000	...	...	...	...	...	...
1965 (Est.)	...	...	...	...	...	...	...
Low	700,000	...	...	...	...	...	...
Inter.	800,000	...	...	...	...	...	...
High	900,000	...	...	...	...	...	...

¹ Express and freight carried by scheduled combination carriers; freight only for all-cargo and large irregular carriers.

² 1946-1952 data include military contract business as it cannot be separated from civil.

³ Not available.

Source: 1946-1955 information developed by CAA from data obtained from the Office of Carrier Accounts and Statistics, CAB. 1960 and 1965 estimated by CAA Office of Planning, Research and Development.

The average freight rate of the passenger carriers is somewhat higher and provides the Big 4 (American, Eastern, TWA, and United) with a yield of about 22¢ per ton-mile, with the other trunk lines running higher.

The freight rate structure is complex and consists of a combination of: (1) specific commodity rates which are generally 100% of the minimum rates established by CAB in 1953 (i.e., 20¢ per ton-mile for first 1,000 ton-miles in any one shipment and 16.25¢ per ton-mile for all ton-miles in excess of 1,000 in any one shipment); (2) general commodity or premium tariffs applicable to a limited number of commodities which are about 115% of the minimums; (3) directional rates for flowers, builders hardware, perishables, etc., at rates of 60%-80% of the minimums. This rate is used mostly on Eastbound and Northbound shipments to balance the traffic flow and fill up empty space. Under these rates some commodities may be moving for as little as 10¢ per ton-mile.

In contrast Class I rail freight moves at an average rate of 1.4¢ per ton-mile while the truck rate is just under 6¢ per ton-mile. Rates are therefore one of the major problems of the air freight industry. The steady increase in rates (which is in sharp contrast to the trend expected by air freight enthusiasts) has undoubtedly held down volume.

Reversing Rate Trend

If we are to attract large volume shipments, we must reverse this up-trend in air freight rates and bring the rates reasonably in line with surface carrier rates through the use of more economical equipment, improvement of ground handling techniques, and the development of loading docks and similar devices which should simplify loading and cut down time on the ground.

Theoretically the air commerce activity between any two locations is directly proportional to the product of the populations of the two communities and inversely proportional to the distance between the locations. In order to make direct comparisons of different route segments, this formula would have to be modified. The population factors would have to be multiplied by empirical coefficients that would be controlled by the economic character of the communities; that is, whether the communities were marketing centers, industrial centers, recreational centers, balanced communities, etc. The distance factor would have to be modified by a coefficient which compared airline distance with surface distance between the locations under consideration.

Air cargo operations have not followed the general air commerce traffic patterns too closely. Origination of air cargo by community is more highly concentrated than the passenger traffic. Among probable reasons for the concentration of originating air cargo in a small number of cities are that all-cargo service is provided to only a comparatively few points and that the selling effort is concentrated in large cities.

Top Cargo Areas

Table II shows the 25 leading air cargo generating metropolitan areas. It is interesting to note that these 25 areas originated 80% of all domestic air cargo tonnage. Even more startling is the fact that the first five areas—New York, Chicago, Los Angeles, San Francisco-Oakland, and Cleveland—accounted for 49.2% of the domestic total. For comparative purposes, I might state that the 25 leading passenger hubs enplaned 68% of the domestic enplaned passengers.

The geographic distribution of enplaned air cargo seems to have remained virtually unchanged in the past four years. With few exceptions, the rank order and per cent of the United States total of the leading 25 air cargo cities was the same in 1955 as in 1951. Most notable exception was Detroit which slipped from fourth place and 5.5% of the United States total in 1951 to twelfth place and 1.7% of the United States total in Fiscal Year 1955. Miami, on the other hand, moved up from 25th place and 0.7% of the United States total in 1951 to 13th place and 1.6% of the total.

The major air-cargo routes have been

TABLE II
TONS OF ENPLANED CARGO
(Fiscal Year 1955)

Community	Tons	% of National Total
New York-Newark	56,998	17.6
Chicago	47,469	14.6
Los Angeles	26,435	8.1
San Francisco-Oakland	16,364	5.0
Cleveland	12,522	3.9
Boston	10,130	3.1
Dallas	8,460	2.6
Philadelphia	8,011	2.5
Washington, D. C.	6,898	2.1
Atlanta	6,550	2.0
Buffalo	5,522	1.7
Detroit	5,498	1.7
Miami	5,154	1.6
Hartford-Springfield	5,135	1.6
Denver	5,021	1.5
Cincinnati	4,546	1.4
Pittsburgh	4,365	1.3
Kansas City, Mo.	4,314	1.3
St. Louis	4,156	1.3
Indianapolis	3,971	1.2
Milwaukee	3,420	1.1
Dayton	2,831	0.9
Seattle-Tacoma	2,581	0.8
Memphis	2,244	0.7
Fort Worth	2,056	0.6
Sub-Total	260,651	80.2
Grand Total	324,708	100.0

East-West—that is, between the industrial Northeast, the Midwest, and the Pacific Coast. The other important routes are North-South—between the Northeast, Midwest points and Florida, New Orleans and Texas. Traditionally, the Westbound and Southbound traffic has been heavier than the back hauls. The CAB's low directional traffic rates which apply to East and Northbound shipments were designed to help correct this imbalance.

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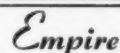


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In summary, I might state that despite air cargo's over-all record of growth, the industry's achievements to date have been below expectations. High costs resulting from the lack of an economical cargo aircraft and relatively inefficient and time-consuming ground handling techniques have been the major obstacles which have made it difficult for air cargo to compete with low-cost surface transportation. But now, I feel we have reason to believe that the industry has come of age and confidence in its future growth should be running high. • • •

HOUSEHOLD GOODS

(Continued from Page 15)

board's comparative-cost analysis of a 4,000-pound shipment of household goods from New York to Paris which

appears together with this article. In spite of an air freight charge of \$1,600 and an ocean freight charge of almost half that, the final total cost by air is \$34.60 less than surface cost.

Now, the above does not take into account those cases where private shippers of household goods via sea transport must maintain themselves at hotels until arrival of the shipment. When such shipments can take weeks (watch those hotel costs rise!) the bill rises sharply, especially where a family is involved. The logical mind will add these maintenance costs to the transportation costs and come up with a true figure.

It's for reasons such as the foregoing that international shippers of household goods have turned to air.

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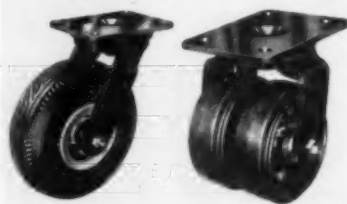


Rapids-Standard Co.: According to Rapistan, versatility and efficiency have been increased by the addition of toggle stands to two models of the aluminum Stevedore, Jr. power conveyor. The 10-foot and 12½-foot aluminum models are



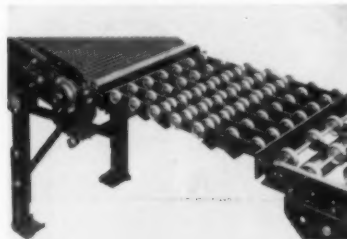
available with the new toggle stands, and it is reported that they can do many of the jobs formerly possible only with the all-steel Stevedore, Jr. They are said to be ideally suited for many tasks because of easy maneuverability and with toggle stands, aluminum Stevedore, Jr.s. can easily be set at varying pitches up to 29 degrees. Toggle stand-equipped aluminum Stevedore, Jr.s. are useful for loading and unloading, and for moving and stacking a wide variety of materials and packages.

On the subject of casters, Rapistan has two new models—the pneumatic tired caster and dual wheel caster (which have been "special order" only until now)—have been added to its standard caster line. Pneumatic-tired casters give quieter and smoother operations and also give a cushioned, shockproof ride to delicate instruments and parts. They also are designed to protect the equipment on which they are mounted and reduce vibration.

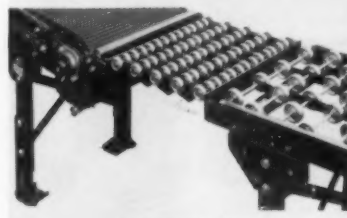


Another feature of the pneumatic tired caster is its easy maneuverability. Dual wheel casters are equipped with hard rubber tires or Durastan plastic wheels for long wear and have far greater load capacities than single wheel casters. In addition, they give maximum load capacity with minimum overall height and longer floor life because of greater distribution of the load over the floor area. (See Come 'n' Get It, Item No. 199.)

A new Rapistan telescoping bridge to be used between adjacent power and gravity conveyors that are lagged to the floor, has been introduced by Rapids-Standard. The



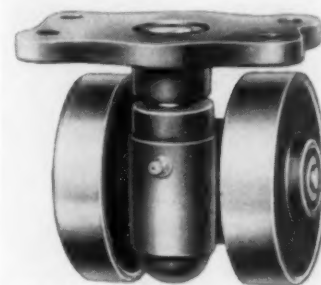
EXTENDED POSITION



RETRACTED POSITION

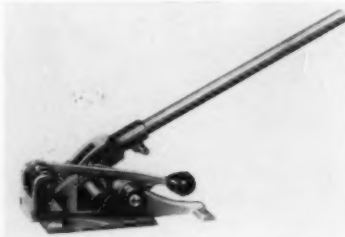
purpose of the telescoping bridge is to allow for a maximum six inches of take-up on the belt pulley of the power unit without necessitating the removal and reinstallation of the connecting gravity conveyor. The bridge, which is available in 12-, 18-, and 24-inch widths, may also be used between two power conveyors. Packages as small as six inches square can easily be conveyed on the bridge. (See Come 'n' Get It, No. 200.)

Hamilton Caster & Manufacturing Co.: A double wheel caster, combining extra load carrying capacity with minimum overall height, is offered by the manufacturers under the trade name of Kalber.



Designed for extra compactness and perfect oscillation, the Kalber features patented "knee-action" for easy rolling, even over rough surfaces, without stalling or digging in, according to the manufacturer. A zerk pressure type fitting, located in the central housing, provides one-shot lubrication—to the swivel assembly and both wheels. The casters are available with all-metal wheels, or equipped with rubber tires. Wheel diameters range from 3" to 9"; capacity ratings from 400 pounds to 1,200 pounds per caster. (See Come 'n' Get It, Item No. 202.)

Allegheny Steel Band Co.: The company reports that just a flick of the wrist will automatically cut off the excess strapping of its newly-improved heavy-duty



tensioner, Model DC 2600, which is designed for use with ¾" x .028 to 1¼" x .035 steel strapping. It is said to work equally well on both horizontal and vertical surfaces.

Brainard Steel Division: A pneumatic stretcher, the PNK, specially designed for use on round or irregular packages where strapping surface is limited is announced. According to Brainard, operator fatigue is reduced with the new PNK stretcher because the degree of tension is controlled by air pressure. The new tool was developed for applications using ¾" and ¾" tensional strapping. Weight of the PNK stretcher is six pounds, 11 ounces. (See Come 'n' Get It, Item No. 174.)

Joint Saw Co.: A new hand truck which makes it a simple operation to easily lift a 700-pound load from the floor level to truck body, bench or wall shelf is now being manufactured and marketed. The manufacturer's report that the 'Easy-Lift Hand Truck' combines the maneuverability of a hand truck with the lifting advantages of a more costly power-operated vehicle." It is reported that with the 'Easy-Lift Hand Crank' almost any person can lift a 700-pound load with very little effort." It is especially adapted to

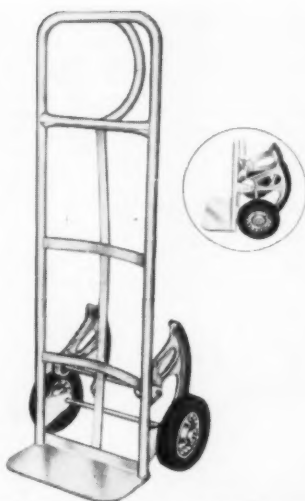


cartons, boxes, barrels, drums, sacks and shipping cases and to bulky packages which have to be handled either in a vertical or horizontal position like furniture, household appliances, die tables, rods and the like. The use of welded-on strap loops and chain hooks assist in handling the larger material.

As a protection against the load running free when being lowered, there is a quadrant locking device which positively holds the load at any desired height. By a quick pull-out of the hand crank handle, and then releasing it, the platform can be lowered one section of the safety quadrant. When released, the hand crank handle snaps back and locks, and holds the load. Or, if operator desires, the handle can be kept in the "out" position and load may be lowered by the operator maintaining pressure on the handle. With the same crank handle locking device, the platform can be automatically locked as the platform is lifted to the desired height. This quadrant locking device is said to be positive protection against the load being dropped and thus damaging the package or material on the truck platform. It also eliminates any danger of injury to the operator, the manufacturer states.

As the desired height of the load is reached, the truck platform contents can be discharged onto another platform, truck, or shelf by tipping the truck forward and the load is shifted to it. This is possible through the hand truck angle design. (See Come 'n' Get It, Item No. 175.)

Precision Equipment Co.: The company has announced production of a new stair-climbing truck which has been designed to drag loads over curbs and up and down stairways. The E-Z Climber's two rocker-arms act like an extra pair of wheels, keeping the truck on a constant line for friction-free travel. Its size and maneuverability make it ideally suited even where there are doorway and aisle limitations. The E-Z Climber is built with a heavy one-inch O.D. tubular steel frame—electrically welded for utmost rigidity—with curved cross members. The 9" x 14" W nose-plate is of heavy 3/16" steel. The



unit has a reinforced base plate beam. The semi-pneumatic, 10" x 2.75", steel disc wheels are ideal even on rough surfaces. Load capacity is 600 pounds; overall size, 46" high x 18 3/4" wide. Shipping weight is 39 pounds. (See Come 'n' Get It, Item No. 198.)

Hydralift, Inc.: The company has introduced a new, lightweight hydraulic lift truck which weighs only 50 pounds but is reported to be able to lift a 500-pound load to a height of 49 inches. Resembling an ordinary hand-truck in appearance, the Hydralift features a specially designed hydraulic jack made to rigid hydraulic specifications. When the operator steps on the foot pedal which operates the hydraulic system, the platform is raised by stages 2 1/2 inches at a time, to a maximum height of 49 inches. To lower the platform, the operator steps on the release pedal which lowers it smoothly, without jolting. The speed at which the platform is lowered can be controlled by the amount of pressure applied to the pedal. Self-lubricating hard rubber-covered wheels and stabilizing legs are among the other Hydralift features. The stabilizing legs, which automatically drop into position as the platform is being raised, act as a safety device to prevent accidental tipping while the load is elevated. Because of its light weight, which is made possible by aluminum construction, the Hydralift has many industrial uses. The principal one is the loading and unloading of trucks. It can be carried on a truck for delivery or pick-up. (See Come 'n' Get It, Item No. 201.)

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Valley Craft Products, Inc.: A drum and barrel truck, which is said to make it possible for one operator easily to place heavy drums on pallets, has just been announced by the manufacturer. Called the Ezy-Rol Barrel Cart, the manufacturer states that its design allows the truck's shoes to be placed on edge of a pallet so that in a single forward motion the drum can be elevated to the pallet with a minimum of operator effort. Drums can be safely lowered from pallets with this cart, Valley Craft also pointed out. Another feature is its spring-operated chime hook which drops over the barrel edge as the truck is moved against the barrel, without the operator touching either the hook or the barrel. The main frame of this barrel truck is constructed of heavy steel tubing with a one-inch diameter axle. It is also available in aluminum where light weight is a factor such as in delivery service. Wheels are equipped with ball bearings

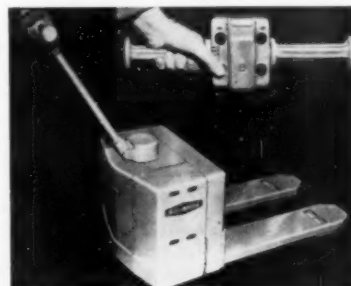
to provide easy rolling regardless of temperature or weather conditions. Solid rubber tires or pneumatic wheels are optional. (See Come 'n' Get It, Item No. 196.)

Oster Manufacturing Co.: A new 112" telescoping portable lift which "provides the advantages of mechanized raising and lowering of loads coupled with the economies of non-powered horizontal transportation," has been introduced by the company. The telescoping lift has been specifically designed for high stacking operations. However, it has a collapsed height low enough for handling loads in elevators, under balconies, and in other low head room areas. The new model, designated as L1112-P, has a 1,000-pound capacity and a battery-powered hydraulic lift. Easy to operate by only one man, it can be used as a platform truck, a straddle fork truck, a portable elevator, or a shop crane.

Permacel Tape Corp.: A high-speed electric girth strapping machine capable of strapping, bundling, or reinforcing on an assembly-line basis, now is available from the company. Designated the Permacel 401 electric girth strapper, the machine can apply in excess of 700 straps per hour, while at the same time automatically compressing the material to be strapped. The complete wrap is applied automatically. The 401 is said to be especially suited for such uses as closing and reinforcing overlap flap slotted containers; bundling prefabricated finished woods, milled lumber, sheet metal and extruded parts; bundling hardwood flooring, reinforcing cartons containing high-weight loads such as small castings or ceramic parts; strapping cartons with

valuable contents to prevent pilferage; and bundling of rods, tubing, cores and dowels. Packages up to 12" x 12" with no limit on length can be handled by the 401. Minimum package size is approximately 4" x 4". The 401 is adjustable to handle either hard or soft materials; square or irregular shaped units. It is powered by a 110 v. single phase A. C., $\frac{3}{4}$ horsepower electric motor. Tape application of the 401 is single wrap with overlap. Permacel strapping and cloth tapes from $\frac{1}{4}$ " to 1" wide are suitable for use with the unit.

The Raymond Corp.: A totally new idea in "walkie" electric trucks has been announced by the manufacturer. The new truck will be shown publicly for the first time at the Material Handling Institute's Exposition of 1956 to be held in Cleveland June 5-8. Design of the new walkie truck features compactness. The overall length is only 20½ inches greater than the load length, making Raymond's model extremely short and very maneuverable. Raymond reports that new exclusive safety features have been incorporated in



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the truck to provide protection for the operator at all times. A special safety button on the end of the handle instantly puts the truck into the reverse direction when it presses against the operator. A unique power pack consisting of four automotive type batteries provides 24-volt operation with no resistance loss in second and third speeds. The manufacturer states that the energy in four automotive batteries will equal that of a single industrial battery. The four batteries can all be charged at the same time without being removed from the chassis. Other features: three travel speeds; fingertip controls for travel, lift and lowering; easy maintenance; smooth pallet entry and lightweight construction. The initial model is designed for pallet handling and is offered in 4,000-pound capacity. (See Come 'n' Get It, Item No. 197.)

Hyster Company: For rapid handling of cartons and packages without pallets, Hyster has introduced its new Cart-N-Grab for Models UC-30 and YC-40, 3,000- and 4,000-pound capacity lift trucks. The Cart-



N-Grab arms, claimed to be the widest in their field, will accommodate packages from 22 $\frac{1}{8}$ " to 70 $\frac{3}{4}$ ". Incorporating both the Hyster Load-Grab and Side Shift features, the Cart-N-Grab holds entire packages firmly, eliminating any spillage or damage. Arms are said to operate faster than any comparative models and the Hyster Side-Shift feature permits faster positioning.

Another announcement revealed that the operating advantages of Hyster's Monomast Lift Truck are now available for the first time on a pneumatic-tired truck, the QN-20, of 2,000-pound capacity at 24-inch load centers. The compact new Hyster QN-20 Monomast Lift Truck is claimed to be an ideal "work horse" for



both inside and outside production. Specific operating advantages, the result of single-upright "panoramic visibility," include faster load placement, reduced

driver fatigue, and greater safety. Rigidity and stability factors of the Monomast upright assembly are termed unexcelled by the manufacturer. Compactness and maneuverability permit this lift truck to work rapidly in narrow aisles and crowded warehouse areas. It is powered by a heavy-duty air-cooled Wisconsin gasoline engine and is equipped with pneumatic tires for dependable performance on all surface conditions.

Elwell-Parker Electric Company: A new 3,000-pound capacity model, the second of its Cargo-Scout fork truck series, has been introduced by the company. The truck is engineered to handle loads in confined areas at maximum speeds. It features compact design with a short wheelbase and 360° steering to permit maneuvering in narrow aisles and inside truck trailers. A unique device is provided on the steering mechanism to prevent steering wheel kick-back. On jobs where the operator must get on and off the truck frequently, stand-up end control provides extra convenience. The new model has a 3,000-pound capacity at 24" on a 68" high model and a 3,000-pound capacity at 20" on an 83" high model. Additional features include a worm drive, packaged unit assemblies, contactor controls and a caster type trail axle.

Lewis-Shepard Products, Inc.: The company has announced a new truck for use in handling cargo at airport terminals. This new 1,000-pound capacity truck has ball-bearing fifth wheel steer and can be either pulled manually or, if equipped with a towing eye in the handle, pulled by tractor. Slatted wooden deck is 96" long x 36" wide with a deck height of 26". On the sides of the deck there is a 6"-high railing, and on the front and back, an 18"-high railing. Under the deck in the middle of the truck, there is a stainless



steel waterproof compartment measuring 6" x 18" x 22". This compartment is used to store a tarpaulin which covers and protects the baggage from rain or snow. Semi-pneumatic tires (16" x 4") make the truck easy to pull and an automatic brake makes it easy to stop. The brake is on the front wheels and is automatically applied when the pulling handle is raised to the vertical position. Lowering the handle to a pulling position releases the brake. Sealed bearings in the wheels do not require frequent periodic greasing; bearings are sealed-for-life and need only a flushing twice a year.

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New Items This Month

It is the policy of the editors to retain each Come 'n' Get It item for a period of three months.

The items added this month are numbers 184 to 202 inclusive.

The numbered paragraphs below correspond with the numbers appearing in the coupon in this department. To order one or more pieces of literature, or other types of materials, at *absolutely no charge to you or your firm*, just encircle the corresponding number in the coupon, fill in the required information, and mail it in. *Air Transportation* will do the rest of the job.

172 Shippers and business executives are invited to read, *There's Profit in the Air with Clipper Cargo*, a 14-page book published by Pan American World Airways which features seven case histories showing how various businesses save large sums of money through the use of air cargo.

173 Users of steel band for packing their products will be interested in receiving this new two-page catalog sheet providing widths and thicknesses, number of feet per pound, and tensile strengths of light- and heavy-duty Alleghany Steel-band Strapping in all available sizes.

174 Literature on a new hand truck reportedly designed to lift easily a 700-pound load from floor level to truck body. Called the Easy-Lift Hand Truck, it combines the maneuverability of a hand truck with lifting advantages.

175 Information on a pneumatic stretcher designed for use on round or irregular packages where the strapping surface is limited.

176 Flying down to South America to close a business deal or to relax for a while? We recommend you heartily to Panagra's 108-page illustrated book, *How to Get the Most Out of Your Trip to South America*.

177 Here's another handy Panagra booklet—this one specifically designed for the shipper and forwarder. Provides you with a quick reference guide to shipping from cities in the United States to countries in South America. Includes document requirements, routing patterns, etc.

178 Towmotor's set of three brochures detailing for busy executives concerned with materials handling the company's complete line of fork lift trucks, tractors, and accessories.

179 Interested in chartering an airliner? Here's an informative little folder which tells you all about the recently organized Air Charter Traffic Exchange.

180 Avianca has produced an unusual brochure which features a series of detailed colored street maps of the major cities it serves (Miami, Miami Beach, Bogota, Madrid, Paris) as well as international route maps showing Avianca's routes, connections, and terminal points.

181 Sixteen-page illustrated catalog of company's whole line of electrically-driven industrial trucks.

182 See the World with Sabena is an excellent 14-page booklet containing a series of unusually fine photographs of some of the countries it serves.

183 Reprint of *Behind KLM's Cargo Drive*, a comprehensive report on the Dutch airline's efforts in the field of international air shipping.

184 Attractive folder on Air Express International Corp.'s new Golden Rocket Service for shippers.

185 Information on a new-type lightweight super-tough cotton canvas designed for outdoor durability. Reported to be waterproof, weatherproof, fireproof, abrasion-resistant, and flexible under all conditions.

186 *Air Freight Tailored to Your Needs*, a colorful and effective brochure highlighting United Air Lines' air cargo services. Includes an interesting illustrated description of UAL's new DC-6A airfreighters.

187 *Your Slick Airfreight File*, a regulation-size folder for your file which features various types of information concerning Slick Airways, including company offices in various parts of the country, route map, etc.

188 Do you have packing problems? Here's a new shipping container catalog, illustrating and describing a broad line of shipping containers made of plywood, craveneer, corrugated, veneer, or saved material in cleated, hinged, nailed, or wirebound designs. Also included are returnable containers and pallets.

189 Ask for the 12-page booklet, *Your Employees' Time is Too Valuable to Waste*. It's all about the Tickometer, an electrically operated machine which counts and (optionally) dates, codes, endorses, or otherwise imprints coupons, tickets, labels, paper, currency, checks, and many other paper items at speeds up to 1,000 a minute.

190 Four-page illustrated bulletin which provides detailed information on a new lightweight, aluminum power belt conveyor.

191 *The Eye and the Echo*, American Airlines' excellent 10-page pamphlet on the subject of weather radar in commercial airliners. Beautifully illustrated. Provides a simple, straightforward explanation of how it works and what it means to the traveling public.

192 Illustrated job study showing how new materials handling techniques helped the Packard Division of the Studebaker-Packard Corporation to effect important economies.

193 Here's another in REA's fine series of folders describing the services and advantages of its Air Express Division. Ask for *When Seeing is Deceiving*.

194 *How to Ship by Air in Corrugated Boxes* is an exceptionally good 24-page booklet which does an effective job pointing up the close relationship between proper packaging and air shipping. Includes a wealth of material.

195 New four-page bulletin showing features and uses of a manufacturer's overhead trolley conveyors. Illustrated and described are its applications to transportation, storage, processing, etc.

196 Information on a new-type drum and barrel hand truck which enables its operator to place heavy drums on pallets with exceptional ease.

197 Information on what is described as a new idea in walkie electric trucks, designed for pallet loading. Principal feature of this new walkie truck is compactness and maneuverability.

198 Descriptive material on a new stair-climbing truck designed to drag loads over curbs and up and down stairways. Load capacity: 600 pounds.

199 Information on a pneumatic-tired caster and a dual wheel caster—the first designed to give a shockproof ride to delicate instruments and parts; the second designed for greater load capacities.

200 Shipping and production departments utilizing conveyor equipment will be interested in reading about a telescoping bridge which is used between adjacent power and gravity conveyors that are lagged to the floor.

201 Descriptive literature on a new lightweight hydraulic lift truck (weight 50 pounds) which can lift a 500-pound load to a height of more than four feet.

202 Brochure describing a manufacturer's line of casters whose capacity ratings range from 400 pounds to 1,200 pounds per caster.

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